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DOCTORAL THESIS

Lines in the Sand: Urban Design Attributes, Characteristics and Values of Selected Gold Coast Beach Precincts

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Lines in the Sand:
Urban Design Attributes, Characteristics and Values of
Selected Gold Coast Beach Precincts

This dissertation is presented for the degree of Doctor of Philosophy

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Abstract

The thesis seeks to understand how people value, use and relate to urban beach precincts so that the urban design and development of seaside places may functionally reflect the role that they play in people's lives; in particular, the walkability of the precincts and the degree of public access to the beach. The research has examined the complex relationships between the urban design attributes and spatial arrangement of beach precincts and public access to activity, amenity and facility in a case study of three different types of Gold Coast beach precincts. Urban design theories and guidelines were examined to produce an urban beach typology and develop tools of analysis to assess and survey the beach precincts using the principles of governance that prioritised an accessible, walkable and restorative environment.

Observations were conducted of use and activity in transitional locations between the natural-built and public-private environments in the precincts. The urban design analysis was combined with an inquiry into the expectations, preferences and perceptions of beach precinct use and visitation. The research further inquired into the public and professional narrative of the urban design, governance, planning and development of beach precincts using content analysis of web pages and articles on the 'Oceanway' and public access to beaches. Finally, a Delphi group process inquired into the opinions and beliefs of professionals who had an interest in the urban design and planning of beach precincts, and compared them to the evidence produced in the content analyses, urban design survey and field observations.

The research has found that dominant and special interest groups have created a cultural landscape that favours the activity interests of active adult males. In doing so, they have marginalised a broader constituency including children, carers, seniors, socially, economically, perceptually and mobility-impaired people, women and in particular older women, and in the context of the Gold Coast, all those people who live in inland suburbs.

The research identified the most important spaces and edges for public access to amenity and activity are along the pathways through the transitional corridors located between public and commercial and built and natural forms. The thesis proposes a research-based urban design and planning process, aligned to the inherent values of place, to produce a public realm that does not compromise or conflict with the restorative nature of the adjacency of environments found in an urban beach precinct.

Declaration

This thesis is submitted to Bond University in total fulfilment of the requirements of the degree of Doctor of Philosophy by Research. This thesis represents my own original work towards this research degree and contains no material which has been previously submitted for a degree or diploma at this University or any other institution; except where due acknowledgement is made. In addition I certify that all information sources and literature used are specified in the thesis.

Nigel Llewellyn Cartlidge

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Publications Related to the Research

- Cartlidge, Nigel 2014a, *Designing and Planning Beach Precincts*, Australian Regional Development Conference. Economic, Planning, Environment, Community. Albury, New South Wales, 15-17th October, 2014. http://epublications.bond.edu.au/fsd_papers/48/
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Glossary

Amenity

Amenity is a term meaning ‘the quality of being pleasant’ and is widely used in planning to describe one of its principal objectives. Amenity is a composite of aesthetic and environmental qualities. These can be private views, privacy, quiet, sitting, landscaped and play spaces, or public views from public spaces, pleasant streets, furnishings, landscaping, public spaces, and public art (Punter 2003).

Attribute: The specific thing or artefact found in a place that can be used to construct a typology of beach precincts or contribute meaning to the urban design principles adopted for this thesis. The typology is constructed using similar physical, cultural and natural artefacts such as roads, pathways, residences, apartments, resorts, shops, café’s, SLSC buildings, showers, viewing platforms and foreshore-parks to sort different beach precincts into types. Some of these attributes are common to all types of urban development, others such as foreshore-parks are only found in beach, river or lake precincts.

Barbeques are a feature of Australian parks. They are free to use, usually electric, often found in pairs and next to sheltered bench tables. They are customarily cleaned by the user after they have finished.

Beach Precinct: The precinct is used for detailed analysis of the social, movement, activity and other functions of the precinct that span the built and the natural environments found in the beach precinct. Its dimensions are intended to be related to the size that can be comprehended through a chosen walkable distance of about two minutes and where the built and natural features in the precinct can be visually perceived from all places within the precinct if clear views were possible.

For the purposes of this study the beach precinct has been defined by the researcher as a space with dimensions that are aligned with the shoreline 140m inland and 250m in dimension with an approximate area of 3.5 hectares. This gives a walkable space that can conservatively be traversed in any direction in approximately two minutes. At this chosen scale it is possible for the observation points to be visible in the distance from at least one other observation point. The precinct will be centred on a social node and will include two beach access points and two changes of form with the principal built form.

Bubblers Australian term for a drinking fountain.

Characteristic: The typical properties of an attribute that differentiates or distinguishes one beach precinct from another. For example, the attribute of a foreshore park can be described by its design, size, spatial arrangement, and provision of facilities like toilets or by the possession of a particular designation for activity or use such as children's playground or event space and these characteristics differentiate the foreshore parks in different beach precincts.

Constituency of Advantage: All the beach precincts of the study appear to positively discriminate in favour of active adult males, local residents, cyclists, the wealthy, property owners, tourism operators, real estate interests, surf lifesaving clubs and their members, the physically fit and mobile. This constituency of advantage is likely to be overrepresented in the urban design, planning, management and governance of beach precincts (Mees and Groenhart 2012)

Constituency of Disadvantage

The constituency of disadvantage identified in this thesis is a broad grouping that includes children, carers, seniors, socially, economically, perceptually and mobility-impaired people, women and in particular older women, and in the context of the Gold Coast, all those people who live in inland suburbs.

It is a constituency rather than a community as, other than gender, people can move into and out of it and only share disadvantaged access to the public spaces of the beach precinct as a common characteristic of membership of the constituency.

Culture is described by Mitchell (2000) as encompassing language, dress, food, habits, music, housing styles, religion, family structures, and most importantly *values*. It is also referred to as a total way of life of a people and what is left over after economy, politics and society. Culture can also be seen as concerned with the *symbolic* artefacts including the built environment produced as a result of the *material* relations of politics, economic and society or that which is not nature (Williams 1976). It is also understood as both a way of – encompassing ideas, practices, institutions and structures of power – and a whole range of cultural practices: artistic forms, texts, canons, architecture and mass-produced commodities (Nelson, Treichler and Grossberg 1992).

Locality: is the main unit of urban design analysis in this thesis and its meaning is the area immediately around a specific location or observation point as far as 35m or the theatrical distance from the location (Gehl 2006).

Neighbourhood: Neighbourhoods are subject to many definitions. New Urbanism regards the neighbourhood as a village, which when combined with other neighbourhoods creates a town or a city. In general, definitions of neighbourhoods include a size, identifiable centres and edges, connectedness with the surroundings, walkable streets, and sites for civic uses and social interaction (US Green Building Council 2008).

Nippers, is the name given to younger club members in the Surf Life Saving clubs. Nippers participate in regular weekly activities during the season which runs from September to May in Queensland. Nippers are a special category of membership from 5 to 13 years of age with their own program of surf skills, lifesaving, beach and surf activities and events (Surf Life Saving Australia 2013b).

Proximity

Proximity reflects two land use variables: density (or compactness) of land use and land use mix (the degree of homogeneity or the extent to which different uses are co-located in space). Two of the most important factors in determining the ‘walkability’ of an area are the proximity (how close destinations are to walk to) and the connectivity (how direct the routes of travel are). Urban environments, which are compact and intermixed, create shorter distances (proximity) between desired destinations, thus encouraging people to walk. This reinforces the notion that spatial landform patterns, population density and mixed land use of an area are interrelated and all encourage walking (Australian Local Government Association *et al.* 2008).

Sustainability and Urban Sustainability

Sustainable means able to be maintained and, using its associated ecological meaning, refers to exploiting natural resources without destroying the ecological balance of a particular area. Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs (The Brundlandt Commission, 1987).

Promenade in this thesis is used both to describe a beachfront transitional corridor route and a leisurely form of walking, and is a significant feature of resort and seaside visitation which clearly links activity to place.

1. **Promenade**, place for strolling, where persons walk at leisure for exercise, display, or pleasure. Promenades are located in resort towns and in parks and are public avenues landscaped in a pleasing manner or commanding a view. Vehicular traffic may or may not be restricted (Encyclopaedia Britannica 2013).
2. **Leisurely Walk**, selected related words - promenade, stroll, amble, wander, roam, saunter, perambulate, and ramble (Encyclopaedia Britannica 2013).

Transitional Corridors, Locations, Forms and Edges as defined by this thesis serve particularly important functions for residents, visitors and tourists in a beach precinct. The key transitions occur along the walking corridors that traverse and transect the elements of the beach precinct typology:

- **Transitional Locations** are found at social nodes, beach access points and gateways where facilities provide access to specific activities and amenities;
- **Beachfront Transitional Corridor** found along the transverse path between the access form and the beach in places with public foreshore spaces;
- **Gateway Transitional Corridor** found along the transect path between the built and access form, and
- **Transitional Edges** - the interfaces between public and private/commercial property and the different forms of the typology.

Visual Survey Terms

In the analysis of the visual extent of beach precincts it was necessary to define particular meanings to describe different types of views adopted for the visual survey:

‘Panorama’ is seen as the extent of an unobstructed view to the horizon that the viewer observes standing at an observation point and limited to observing from left to right through about 180 degrees.

‘View’ is seen as the extent of an area that the viewer observes standing at an observation point looking straight ahead. It is limited to the range that objects or features can be observed and the clarity of detail that can be identified in the view.

‘Vista’ is a type of view that is framed by elements in the landscape that the viewer observes standing at an observation point looking straight ahead and this view is limited by what objects or features can be clearly identified in the view.

‘Picturesque’ is a panorama, a view or vista that is visually appealing, attractive or impressive and related to natural, built or human environments and activity that may be considered suitable as the subject for a photograph or painting.

‘Scenic’ is a panorama, a view or vista that is related to the natural scenery of the area and suitable as a photograph or painting.

Value: The worth or importance attached to the attributes and characteristics of the spaces and places, natural, transitional and built environments of the beach precinct. The degree of importance is expressed as the value that an author, commentator, observer or correspondent, associates or attaches to the attributes or characteristics of the beach precinct. The associated or attached degree of importance of the different attributes and characteristics of the beach precinct may be personally, socially or culturally associated with their history of use or degree of fit for their preferred purpose of visit.

Walkability

Walkability has been developed as a measure to assess the relative characteristics of different urban forms and designs in the thesis (section 3.3.2). Questions about residential density, land use mix, accessibility, street networks and connectedness, walking facilities, aesthetics and safety are often included (Australian Local Government Association *et al.* 2008)

Walking Speed

The walking speed adopted for this research project is 4.5 km/h per hour, giving a walking distance of 375 metres in 5 minutes and 750 metres in 10 minutes. This has been converted from a study that indicates older pedestrians walk at around 4.11 ft. per second (Knoblauch, Peitrucha and Nitzburg 1996). The lower speed is seen as more appropriate as pedestrians are usually either younger or older than average. The lower speed also allows for climate, terrain and slope.

Abbreviations Used in the Fieldwork

Throughout the thesis the transitional locations and observation points were assigned a code:

BHSN	Burleigh Heads Social Node (Burleigh Heads SLSC)
BHBA1	Burleigh Heads Beach Access One (Goodwin Terrace)
BHBA2	Burleigh Heads Beach Access Two (Children's Playground)
BHINT1	Burleigh Heads Intersection One (Memorial Park)
BHINT2	Burleigh Heads Intersection Two (The Esplanade/Gold Coast Highway)
BRSN	Broadbeach Social Node (Kurrawa SLSC)
BRBA1	Broadbeach Beach Access One (Toilet Block)
BRBA2	Broadbeach Beach Access Two (Northern Foreshore Park)
BRINT1	Broadbeach Intersection One (Victoria Avenue/Old Burleigh Road)
BRINT2	Broadbeach Intersection Two (Albert Avenue/Old Burleigh Road)
MBSN	Mermaid Beach Social Node (Mermaid Beach A.E.M.E SLSC)
MBBA1	Mermaid Beach, Beach Access One (Pocket Park)
MBBA2	Mermaid Beach, Beach Access Two (Ventura Road)
MBINT1	Mermaid Beach Intersection One (Ventura Road/Hedges Avenue)
MBINT2	Mermaid Beach Intersection Two (Montana Road/Hedges Avenue)

Other Abbreviations used in the Thesis

ABS	Australian Bureau of Statistics
BBQ	Barbeque
CABE	Commission for Architecture and the Built Environment
CCTV	Closed Circuit Television
CPTED	Crime Prevention through Environmental Design
CNU	Congress for the New Urbanism
DTI	Department of Trade and Industry
DETR	Department of Environment, Transport and the Regions
GCCC	Gold Coast City Council
GCPS	Gold Coast Planning Scheme
IPA	Integrated Planning Act
LEED ND	Leadership in Energy and Environmental Design, Neighborhood Design
LGMS	Local Growth Management Strategy
LUPTAI	Land Use and Public Transport Accessibility Index
MPC	Master Planned Community
PIA	Planning Institute of Australia
RICS	Royal Institution of Chartered Surveyors
SEQ	South East Queensland
SEQRP	South East Queensland Regional Plan
SLA	Statistical Local Area
SLS	Surf Life Saving
SLSA	Surf Life Saving Australia
SLSC	Surf Life Saving Club
SLSQ	Surf Life Saving Queensland
TfL	Transport for London
SIG	Special Interest Group
UDAL	Urban Design Alliance
UDAL Qld	Urban Design Alliance Queensland

Preface

In this preface I will try to summarise the position from which I approach this thesis. It is from my passion for living by the sea that I draw the inspiration and determination to articulate the importance of the urban beach to the communities that live, work, use and visit the beachfront. In a sense, the beach and its adjacent development form the *genius loci* (spirit of place) of many of our social constructs. When the spirit of place is strong, they are some of the most important and treasured urban forms in our society with the power to generate social, economic and cultural wealth.

Growing up in the small Welsh coastal town of Penarth, I formed my ideas of place from living by the seaside. The beachfront promenade, Alexandra Park that wound down from the town centre, the public swimming baths, the pier, the cafes and restaurants, the pebble beach, the yacht club, Royal National Lifeboat Institution station and jetty, the Italian gardens, mini golf course and the cliff-walk were the centre of my social recreational and restorative world.

Penarth was a Victorian railway transit-oriented development. It promoted itself as a day-tripping and resort town for the Welsh Valleys and the distant English Midlands. The Pier also connected the town with the other small ports along the Welsh and English coastline of the Severn Estuary and Bristol Channel. In its heyday there was a regular steamship service shuttling across and along both the Welsh and the English coasts.

The town had docks and riverside wharfs that were once a major coal exporting facility. By the time of my childhood the buildings and coal loading facilities were forlorn and deserted relics which were conversely a wonderland for adventurous boys. Standing on the wharf I watched the ships coming and going from the port of Cardiff where they travelled to far off lands. The sense of being part of something much bigger than my small town was clear when I lingered on the pier, as I knew that the same body of water I gazed on encompassed the earth.

The coast could also be a place of solitude and quiet, especially on the frequent grey days when an ice cream was the farthest thing from most people's minds and the beachfront was deserted. On a stormy winter's day it was a place to witness the power and majesty of the sea as it crashed against the cliffs, pier and promenade.

The Pier was, for most young people of the town, a special meeting place with its once Grand Ballroom the site of the Friday and Saturday night discos. The pier also had its gold-medal-winning Italian ice cream kiosk and the sheltered places to hang a line, hoping for the fabled whiting runs which the older men would tell you about.

The beach was also a place to connect to history, and had not always been a safe or welcoming place. The offshore islands were used by Irish, Norse and later Moorish pirates as a base for their coastal incursions and slaving raids. Even their Norse names were echoes of the past: Flat Holm (Ynys Echni) and Steep Holm (Ynys Ronech).

The islands were also where sixth century saints and hermits sought and served their god. Remnants of the 19th Century Palmerston forts and World War fortifications can also be found there. Flat Holm was once the site of a cholera hospital and where Marconi transmitted his first signal over open sea. The sound of the Flat Holm Foghorn was a familiar sound that I often heard in my bed at night. Even today I feel that a beach is not complete without the sight of distant shores and islands.

The town beach was the main, but not only, beach that I used. Along the rail line was a small cove with a sand beach and rock pools to gather shellfish, and a small shop by the caravan park on the cliff top. The terminus of the line was Barry Island and its Grand Esplanade, hotels, Butlins holiday camp and a fun fair. Further afield were the summer holiday destinations with their clear, clean, green water, the rural and wild beaches of West Wales and the West Country.

In short I came from a place where the identity of the people was partly created and contained by the foreshore and beaches. It formed in me expectations of the level of public access, facility and amenity for the recreational, social, cultural and restorative values of an accessible coast universally open to all and managed by the council for the people as a public good.

In leaving this place of my childhood and youth I came to understand the meaning of *hiraeth* a Welsh word that has no cognate in English. It is tied to the Welsh sense of place and reflects the deep attachment or homesickness for a home to which you cannot return, a home which maybe never was except in the heart. It encompasses the nostalgia, the yearning, the deep grief for the lost places of the past. It is a feeling Welsh people only get when leaving the places of their ancestors and take for granted when they are there.

Coming to Australia by air, one of my first sights was of the glittering white capped ocean crashing against the shore, a sight to cause the spirits to soar. I loved the coves, bays and open surf beaches of Australia on first sight. They appeared then, as they do now, as part of the place identity of the nation.

There were some noticeable differences between the Australian and Welsh coasts though, most striking of these, is the importance of the Surf Life Saving Clubs with their nippers, carnivals, bars, cafes and pokies. There is no such beach organisation in its obvious importance to the community to be found in Wales. The length of the summers and the place that beach activities had in Australian life was immediately obvious, as was the need for my young children to learn beach survival skills. The

Surf Life Saving Clubs are socially much more than a club; they are centres of the local community and a place to begin to assimilate into Australian culture.

The scale, size and frequency of Australian beaches along the eastern coast create an impression of unending abundance. They rarely feel crowded, there is nearly always a quiet place to sit and sunbathe, read a book or rest with the sounds and patterns of the surf. The climate also means they are likely to be active places throughout the year for swimming, paddling, fishing, boating, body boarding and surfing. The wilder weather will often bring out the big wave kite and board surfers, whilst others watch from shoreline vantage points.

There is also the joy of the unexpected arrival of pods of dolphins that appear to be playing in the surf or racing across the bay. If you are lucky you may even get to see whales breaching as they head north or mothers nursing their calves down the coast towards Antarctica. Walking along the beach you are also likely to encounter shoals of fish and wheeling seabirds or, after storms, the debris of the offshore reefs.

The types of beaches I found in Australia were similar to other places, town and city beaches, through to rural and wild beaches in remote places. How they were used was also familiar but with subtle differences. In Australia the council provide electric barbeques for public use and there are fewer low cost fish and chip cafes. Open spaces along the urban beachfronts are either paved or unpaved tracks, not concrete buttressed promenades, and social sports such as touch football or cricket games are common in the green-spaces of the foreshore park and along the beach.

In time, I realised that some beaches, even in the centre of urban areas, are privatised or semi-privatised by the building of homes, hotels, apartments or resorts along the beach front. The reduced levels of access deter visitation to these beachfronts. They are hard to get to other than by car and when you get there, parking spaces are few and far between. Access is often by narrow entries through the dunes, and the soft sands can also be a deterrent for visits by the less mobile or encumbered.

I initially accepted these inconveniences as just part of the difference in use and function of Australian beaches until I studied urban design and planning. I began to see many of the patterns of beachside development as imported concepts of a globalised economy and not just as a natural result of the sense of endless space to be found in Australia. The beachfront developments are not necessarily a natural expression of developmental variety in a land with endless beaches. They were just as foreign to the egalitarian Australian notions of openly-accessible beaches as were my personal cultural notions of beach and place.

Education has led me to understand that much of the current development on Australian beaches had a genesis in the societies of Europe and America where people and commercial entities regularly own the beach and its uses. The European beachside developments of cabanas and rented umbrella spaces on the beach have not yet transitioned onto Australian beaches. However, the models found in the USA have had a lasting influence on Australian developers.

There are many reasons to think that the imported models of privatised beachside development in Australia will lose public support. The reasons are social, economic, environmental, and cultural. The coastal population of Australia is growing rapidly, but governments and developers will find it increasingly difficult to continue to develop new urban beaches. Resistance is also likely from environmental groups and residents to the development of new rural and wild beaches. In Australia there is a widely held view towards coastal development of ‘not another Gold Coast’. Perhaps this is an indication of the rejection of an urban form perceived to be ‘foreign’.

The coast is subject to change through erosion, weather events and climate change. Much of the rapid beach suburb development built in the last fifty years is in places that could be vulnerable to naturally changing coastal shapes. The privatised coastal developments have created a level of economic risk for federal, state and local governments that will largely be met by the public purse (Morris *et al.* 2009).

The crowded beaches of Europe are rare in Australia, but rising populations both in the coastal and inland towns and cities will inevitably place increasing pressure on the existing more-easily accessible public urban beaches. The recreational and restorative value of these urban beaches will increase along with the intended increase in density but decrease as they become more crowded.

All this has led to my interest in studying the spatial form and sense of place or *genius loci* of urban beaches in order to identify how the current types of seaside development distribute value and control public access. I want to know how people value, use and relate to urban beach precincts so that the urban design and development of seaside places can functionally reflect the role that they play in people’s lives.

The research is expected to support the conceptualisation of urban design and planning guidelines for the use of this high value land that is appropriate to character and context of beachside places. The research will also seek to identify appropriate urban design interventions for future development of coastal precincts to achieve the highest and best use of land at the coast from a social, recreational, restorational and cultural perspective.

Chapter One Conflict in the Design and Use of Gold Coast Beachfronts

Place is security, space is freedom: we are attached to the one and long for the other. Yi-Fu Tuan (1977).

This research arises broadly from an interest in studying the spatial form and sense of place or *genius loci* (spirit of place) of urban beach precincts to identify how the current types of beachside development distribute value and control public access. The research also seeks to understand how people value, use and relate to urban beaches so that the development of beachside places may functionally reflect the role that they play in people's lives.

Specifically, the research examines the complex and contested layers of individual and group preferences for the use of the public spaces that connect the built and natural environment in the coastal city of the Gold Coast. It examines the appropriateness for use and activity of the design of those spaces and places in different beach precincts found in the city. This is expected to lead to suggestions that can create better solutions for the design of these public spaces and places.

This thesis attempts to explore the design of the public space network that provides the gateway to the recreational, restorative, health and lifestyle benefits of access to the natural environment of the beach in an urban context. This research also examines the relationships between the use of the public spaces of beach precincts by residents, visitors and tourists and the urban design attributes and characteristics associated with the different types of beach precincts found along the ocean shores of the Gold Coast.

The research methods are selected to scrutinise the expectations, preferences and values people hold for the public space network of beach precincts. They also survey the types of spatial and physical relationships and how the attributes and characteristics of the urban design of different beach precincts meets people's needs and desires for individual, social, cultural and physical activity.

The conflict over the design of the beachfront is encapsulated by Tuan (1977): 'Place is security, space is freedom: we are attached to the one and long for the other'. The private property interests see the beachfront as home, a place for the secure enjoyment of the views, for which they paid a premium price. The public access advocates see the same space as a way to enjoy the freedom of the natural environment found at the beach. In the foreshore parks the conflict is similar in that it concerns security and freedom for the preferred uses of

the beachfront: the freedom to enjoy a restorative environment and to relax in a place loaded with personal and cultural meanings, or to safely take part in activities in the spaces alongside or on the beach, such as sunbathing, swimming, surfing and walking.

The study grew out of an interest in a dispute over public access to the beachfronts of the Gold Coast created by conflicting cultural meanings of the appropriate spatial design for the beachfront. There has been a long running engagement between different special interest groups over the use of the dunes fronting the private homes and apartment towers that line nearly half of the available beachfront of the Gold Coast (Willoughby 2012) (Figure 1.0).

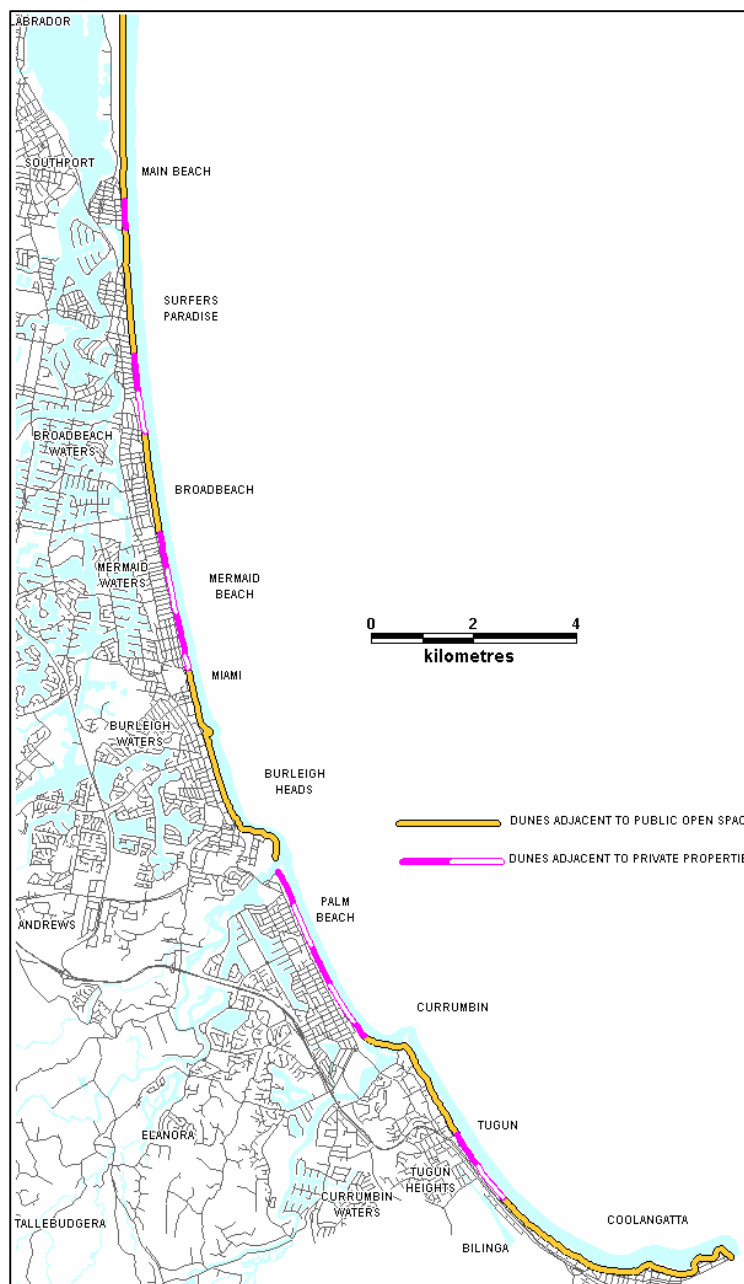


Figure 1.0 Dunes adjacent to public open space or private property on the Gold Coast (Wake et al. 2008)

This conflict was highlighted by the ongoing argument over the construction of the ‘Oceanway’, a public pathway along the dunes in front of the privately owned properties that line the beach (Gold Coast City Council 2010). The Gold Coast City Council (GCCC) has failed to build any significant sections of the Oceanway in front of private property and it has largely been restricted to the public open space and foreshore parks along the beachfront (Killoran 2011b).

On the surface the conflict appears to be a straight-forward dispute over the public right to access the publicly owned foreshore dune for cycling and walking and the resistance of beachfront property owners asked to give up their accustomed privacy and exclusivity of view. The research explores the narrative of public access to the beach, the beachfront and the adjacent development and looks to reveal the deeper and wider meanings the design of this key transitional space raises for public policy decision makers.

Urban design theories and practices have generally arisen from the study of places in existing towns and cities and very few studies can be found that explicitly explore the conflicted and contested urban design along the beachfront (Preston-Whyte 2001). For example, in Mumford’s (1961) classic historical examination of the origins of cities, the spatial forms they took and the social, cultural, political, religious and economic forces that organised them, there is no mention of the phenomena of beachfront resort or tourist coastal cities. Indeed, it is rare to find any urban design analysis for these types of cities or towns outside of the social, historical, tourism and travel literature despite their obvious importance in popular culture since the 18th Century.

The topic for this thesis is the urban design of a particular case of human settlement: the different types of urban beach precincts found on the coast of the Gold Coast, Australia. Urban design principles, attributes and values are the focus of an examination of three selected examples of different beach precincts: Broadbeach, Burleigh Heads and Mermaid Beach.

The beach precincts will be examined using analytical tools developed from the urban typology, urban design and planning literature. These will be used in order to assess their appropriateness for this particular case of development for the cultural and functional role beach precincts play in society. This is expected to suggest improvements or new guidelines for the design, planning, management and governance of beach precincts in Australia and inform debate beyond.

1.1 Brief Background of the Development of Beach Precincts on the Gold Coast

The Gold Coast is an example of a linear coastal city. The city is largely a result of the dominant social, economic, cultural and political values in the city and state from the 1950s to the present day. The development of the Gold Coast coincided with the emergence of global financial, governance and development practices that saw the car emerge as the primary form of personal transport (Calthorpe 2001).

Although settlement along the coast has occurred since the 19th century (Burton 2009), the Gold Coast is essentially a product of the development fashions of the latter half of the 20th century. The genesis for that development is not inspired by Bondi in Sydney, St Kilda in Melbourne or Brighton in the United Kingdom, but by Florida and California in the United States (Burchill 2005).

The development of the beachfronts of the Gold Coast highlights many of the urban design problems created by the laissez-faire, market-oriented political and financial system and its permissive planning regimes of the last sixty years (England 2004). This urban design and planning regime has helped to create the semi-privatised beachfront development which wall off and otherwise restrict public access to the beaches and foreshore.

Whilst the Gold Coast expanded along its beaches and into its hinterland, the new patterns of development were financed by internationalised lending practices and government subsidies to meet demands for sweeping changes to the lifestyles that existed before World War Two (Frumkin, Frank and Jackson 2004). These changes were also facilitated by social, cultural, economic and political changes in the post war period that encouraged and rewarded developers to meet the demands of mass market tourism. There was also a concurrent shift to the coast of retirees from the southern states of Australia, known as the ‘Seachange’ phenomenon (Stimson and Minnery 1998; Australian Bureau of Statistics 2004; Burton 2009).

These social, cultural, economic and political changes also coincided with a post war reluctance of governments to fund or direct the nature of development. However, some planning authorities did persist for a while with prescriptive and detailed town planning codes, New Town development by government financed corporations, public housing programs, slum clearances and redevelopment schemes (Department of Planning Oxford Brookes University 2006; Madanipour 2007).

The political perspective of creating and planning utopian societies lost ground in the latter half of the 20th century, to permissive planning schemes where the developer initiated the nature of the development. In this model of development the designs often appropriated the ideas and values of the dominant urban planning and design movements of their time to facilitate their planning approvals (Forster 2006; McGuirk and Dowling 2009).

The City of the Gold Coast is not a story of the vision of ‘founding fathers’ or colonial settlers who had a particular and articulated political position for the shape that the new city would take. Indeed, it would appear that no single individual or group played the dominant part in the city’s eventual form (van Fossen and Lafferty 2001). The Gold Coast is a place largely created by often ‘larger than life’ actors possessing a culture of boosterism, confidence in continuing growth, status, the pursuit of pleasure and profit, and marketing strategies (Jones 2001)

The Gold Coast was urbanised by a series of developers who took the lead in a political environment that encouraged risk-taking behaviours for high potential rewards (Burchill 2005). Prescriptive land use codes did persist in Queensland until the introduction of the Integrated Planning Act in 1997 (Department of Infrastructure and Planning 2007). However, planners did not appear to proscribe the creation of a built environment where public access was aligned to the inherent values of the beachfront.

Coastal tourism was a major cause and effect of the restructuring of people’s leisure, lifestyle and recreation in the late twentieth century. Capital was drawn into the creation of development products to meet the changing demands of the market for choice and the opportunity to enjoy the changing tourism and lifestyle needs of an increasingly prosperous nation and world (Boissevain and Selwyn 2004).

Tourism, leisure, lifestyle and recreation were the most important factors in determining the morphology of the City of the Gold Coast (Mullins 1991). Indeed, its current urban structure is a result of the usually commercial and political decisions made in creating the city from a scattering of small towns and villages over less than fifty years of rapid development (Burton 2009).

The governance of the Gold Coast during this period was also dominated by many of the same people who were responsible for the development products (Bingham 1991; Needham 2006). The city met the demands of residents, tourists and visitors for recreation and lifestyle

products with nightclubs and party precincts, resort apartments, hotels and gated communities, beach and canal living along with golf course suburbs further inland.

The Gold Coast in common with other contemporary tourist destinations such as Florida has seen recreation, lifestyle and leisure replace agriculture and create a tourism and construction paradigm that does not adapt easily to sustainable development objectives (Chapin, Connerly and Higgins 2007a). The long-term sustainability of the tourism and lifestyle product was rarely considered during the design and build of the urban form, often leaving subsequent generations of rate and taxpayers to struggle with the maintenance of aging public infrastructure (Hough 1990; Mathieson and Wall 1982).

According to Chapin, Connerly and Higgins (2007b) sustainable development legislation has been unsuccessful in producing more compact dense development patterns and reducing local government fiscal stress in Florida. They also observed that sprawl development and a move to the coast continued to surge in those areas most prone to extreme weather events and climate change trends.

This is despite the comprehensiveness of Florida's growth management approach and often innovative planning practices which in many ways are structurally and contextually similar to Queensland's planning approach. There is convincing evidence that Florida's growth management policies have not halted sprawl development and have irretrievably harmed the state economy (Deyle, Chapin and Baker 2007). These findings have implications for the Gold Coast, considering it has been developed in much in the same way as Florida.

The modelling of its development on American precursors also imported many of the conflicted values associated with beach access and sustainability that are inherent to the model (Spearritt 2003). These values underpin the development of urban patterns which had not been seen before in Australia and jarred with existing egalitarian and aesthetic concepts of appropriate types of beachfront development (O'Hare 2006).

The social, economic, cultural and environmental history of the Gold Coast is seen as an important factor in creating the contemporary patterns of settlement. However, this thesis is primarily concerned with the patterns and relationship of use and activity associated with places along the coast. This means that the historical factors are seen as complex and beyond the scope of the thesis. The Gold Coast City Council has produced extensive background research on topics of interest (Gold Coast City Council 2015). The city is also the subject of

research and comment by the Urban Research Program of Griffith University (Griffith University 2015) and other authors such as Burchill (2005) and Armitage *et al.* (2015).

1.2 The Values Adopted for the Research

The possession of a warm, pleasant year-round climate, surf breaks, long, clean, sandy beaches, scenic views, and good public access is of profound economic value for many coastal cities. The design alignment and orientation of the public space between the built and natural environments that maximises these natural and inherent values of beaches is capable of producing a wide range of social, cultural, and economic benefits that have widespread value for the individual and for society (Murphy and Bernal 2008; Raybould and Lazarow 2009; Klein and Osleeb 2011).

This research examines the core individual, social and cultural values that people bring to and associate with the beach precinct. Other values that are produced or associated with beach precincts are: economic, political, spiritual, symbolic and environmental. They are acknowledged in as much as they constrain and affect the individual's ability to gain benefit from the urban beach precinct. No two people or social groups see exactly the same benefits, but most people share the same human perceptions of the environment by using the human dimensions that originates in their evolutionary biology and human senses (Hall 1966).

The core set of values examined in this research consists of the urban design attributes and characteristics of the beach precinct. Focus is given to the nature of the spatial organisation and arrangement of public and private spaces, built and natural environments, amenity and facility in the public realm at a human scale and meeting human needs at a walkable scale. The dominant needs that people expect to fulfil at the beach precinct are recreation, connection to nature and enjoyment of a natural environment that relieves the stresses of everyday living (Mosler 2002; Raybould and Lazarow 2009; Beatley 2010).

Cultural values in the research concern the relationship between place, nature and people and their individual, social and cultural activities. This relationship is examined in the way urban design as a cultural and political process in the creation of the built environment relates to how the design of a place permits, restricts or enables those activities. The relationship between people, the design and use of spaces and places is assumed to be one of multiple lived realities, viewpoints and narratives. As Popper (1968) observed, science must begin with the critical discussion of myths in order to challenge, discuss and improve on them.

The complex relationships and associations people have with nature and place can be expressed in the terms 'biophilia' (Wilson 1984) and 'topophilia' (Tuan 1974), or love of nature and of place. Neither term appears to fully explain people's attachment to particular places, but in combination they describe the values and qualities of those places and the range of ways that people are either attached, are indifferent to, or reject them.

The design of the contemporary beach precinct represents the accumulated values and professional practices of the developers, designers and planners who are responsible for their creation. However, the social, cultural and economic values of these and other interest groups may not match the values held by some of the users of the beach precincts. The research also examines the degree of fit between the professionals who create, design, plan and manage beach precincts and the residents, tourists, visitors and other groups who use them (Jarvis, Kantor and Cloke 2009).

Public health has been a core value associated with human settlement and it has been a guiding concern for planners of towns and cities since ancient times (Mumford 1961). There is evidence that the design of the built environment since the 1950s has adversely affected the physical and mental health of people who live in 'sprawl' environments, such as those found on the Gold Coast (Frumkin, Frank and Jackson 2004, Buchner *et al.* 2008, Thompson Coon *et al.* 2011).

The literature also suggests that the design and governance of beachfront development can be supportive of opportunities for the active healthy lifestyles of residents, tourists and visitors to the beach (Beatley 2010). This can be achieved through the design of walkable neighbourhoods associated with higher levels of incidental exercise that are diverse, accessible and connected to other places in the city and region (Gebel *et al.* 2009).

The design of the beachfront suburbs has placed strains on public finances and imposes a degree of future liability for the public in insurance and taxation rates. There is also an ongoing liability to repair and defend private property and public infrastructure on the beachfront inherited from beachfront development that was designed and built during a period of time in which climate change was not recognised as a problem (England 2007).

The politics of real estate development, corruption, crime, drugs, alcohol, sex and the media and marketing mythologies of tourism and the beach are also important contributory drivers of value in the creation of the recreation, lifestyle and activity of Gold Coast cultural

landscapes (Jones 2001; Baker, Bennett and Wise 2012). Although important to the story of the creation and continuation of the Gold Coast cultural landscape they will not be directly addressed in this research. They will however play a part in the narrative and understanding of the cultural and political decision making processes that affect the beach precincts.

1.3 The Seaside as a Particular Place in the Cultural Imagination

The location of the beach precinct as a special place in the history of development of coastal places is grounded in the emergence of the notion of the seaside as a place for lifestyle, recreation, health and tourism. Starting in England, the notion of a seaside holiday naturally spread to Australia. The Australian seaside resorts of Manly, Bondi and St Kilda were developed in in the 1860s using imported notions of appropriate seaside development brought by British colonists (Butler and McDonnell 2011).

The initial stimulus for the development of the seaside as a ‘health resort’ can be seen to originate in Scarborough, England (Scarborough Tourism Bureau 2012). In 1660 Dr Robert Wittie published ‘The Scarborough Spaw’ which promoted the health benefits of ‘taking the spa waters’ during the summer period of mid-May to mid-September (Wittie 1660).

Scarborough grew rapidly as the world’s first seaside resort town to meet the demand of a growing middle class for an alternative to the spa resorts and was soon followed by seaside ‘health resorts’ around the British coast (Goodall 1992).

By the time the seaside resort came to Australia it had developed and acquired a range of economic, recreational, cultural, leisure, healthy living and tourism values which influenced the design of the spatial arrangement of the built environment and its relationship to the beach. When Henry Gilbert Smith developed Manly as a ‘watering’ place to escape the oppressive summer heat of Sydney (Butler and McDonnell 2011) he brought his knowledge of the seaside resort towns of southern England such as Brighton and Eastbourne with him as a model for his new seaside resort design (figure 1.3a).

The spatial arrangement and land uses found in British seaside resorts can still be clearly seen in Manly, New South Wales in the linear pattern of development. Hotels occupy the prime built edge facing the foreshore parklands and the ocean. Boarding houses provide more affordable accommodation in the parallel streets a short walk from the beachfront and activity spaces and places such as piers, ornamental gardens and funfairs act as focal points for the

amusement of tourists and day visitors line the foreshore. Where the two models of seaside resort differ is in the prevalence of shade trees in Australian seaside resort towns (figure 1.3b).



Figure 1.3a: Eastbourne Promenade, U.K. (Chris Neal 2014)



Figure 1.3b: Manly Promenade, N.S.W (Imagebank, intranet.ballarat.vic.edu.au)

The promenades and squares planted with Norfolk Pines along the beachfront of Manly were intended for ‘ensuring health and amusement to residents, tourists and visitors’ (Butler and McDonnell 2011). The design of the foreshore parklands was compliant with the colonial

legislation of the time to provide a coastal reserve strip of 100 feet from the highest astronomical tide (HAT) mark ensuring public access and a large transitional space between the natural and built environment (Myers 1885 cited in Butler and McDonnell 2011). The spatial arrangement at Manly can be seen as sustainable, enduring and adaptable to changing fashions in cultural uses and preferences.

The British model of beachfront development continued to be influential in Australia with Southport, Surfers Paradise, Broadbeach, Burleigh Heads and Coolangatta displaying many of the same spatial characteristics of the early British influenced Australian seaside resort models. The Australian iteration of the British seaside resort also happens to be the most popular, walkable, publically accessible and heavily used places along the Gold Coast coastline (Wake *et al.* 2008).

Following World War Two the British sought a change from the unpredictable climate found at their seaside resorts and took advantage of economic, political, social and technological changes for developing Mediterranean destinations, especially Spain, for package holidays (Bramwell 2004). Similar social, cultural, economic and political changes occurred in Australia at around the same time, accelerated by annual leave, higher pay and other changes in outlook and lifestyles. Australians were ready for a sea-change and a move from the unpredictable climates of the southern states of Australia to the ‘sunshine state’ of Queensland (coincidentally the sobriquet of Florida) (Osbaldiston 2010).

In the USA this move to the sun was mirrored by the growth of Florida and California as holiday and lifestyle destinations. This trend, known as the ‘flight to the sun’ of the ‘snowbirds’ in the USA, had started in the nineteen twenties. These early American trends to holiday and retire to warmer destinations probably gave the USA a head start in the design and development of mass-market holiday, retirement and lifestyle destinations. This appears to translate into a leadership in the new car oriented development of seaside resorts that was favoured by developers in Australia, particularly on the Gold Coast (Burchill 2005).

Tourism landscapes such as those found on the Gold Coast are a particular form of cultural landscape (O’Hare 1997). They reflect the cultural values of the decision makers who designed, financed, permitted and built them, the tourists who are attracted to visit them and the residents who choose to live there. They are produced by a cultural political process that aligns the design of place to the lifestyles, activities and experiences that the developers believe people are intending to have there (Hackworth 2007; Klingmann 2007). Several kinds

of cultural landscape may be seen to coexist in the same place. A beach precinct may be ‘simultaneously a tourism, recreational, leisure and residential landscape’ (O’Hare 1997: 50).

The degree of influence that local residents will have on the shape of those cultural landscapes varies with the political landscape of the time. Mumford (1961) compares the nature of the conflict between the citizens of ancient empires and their authoritarian rulers with the conflict between the burghers and guilds of cities and the princes and kings who ruled by divine right over the design and spatial arrangement of cities in the Renaissance and Baroque period. This conflict between local cultural preferences and the preferences of the dominant political authority can be compared to the conflicting cultural preferences of local people with the new ‘princes’ of global politics, finance and governance for the preferred design and spatial arrangement of the new ‘global cities’ (Sassen 2005; Knox 2011).

The international nature of the product-oriented design of coastal development found on the Gold Coast has led to a degree of local resistance to development of the same typology in other tourist destinations in Australia (O’Hare 2006). Considering the nature of visitation to tourist destinations where over 80 per cent of visitors are described as local, the importance of meeting local preferences for the sustainability of beach precincts appears to be self-evident (Powell and Muldoon 2005; Raybould and Lazarow 2009,).

International tourists can be seen as representing a small proportion of the total users of the beach precincts. There is also some evidence that tourists actually want to take part in the local nature of a place and want to interact with people who work and live in a locality. They want an authentic experience of place and often reject places they see as being able to be found anywhere (Hayllar, Griffin and Edwards 2008).

1.4 The Cultural Landscape of the Gold Coast Beach Precincts

Cultural landscape theory provides some theoretical basis for the analysis of beach precincts as it explicitly recognises the cultural values of society as the prime force in forming the anthropogenic landscape of beach precincts (Hartley and Green 2009; Wake *et al.* 2009; Green 2010). The cultural landscape analysis may be the most important relevant theoretical framework for understanding the urban design of beach precincts as it explicitly unites the natural and built environments. This is in contrast to much of the urban design literature that tends to see the built and natural landscapes as separate and adjacent settings.

The Gold Coast beach precincts constitute a recent cultural landscape produced by social, economic, environmental, cultural and political notions of appropriate use. Developers have responded to those notions and produced a product that could be rendered obsolete by changes in the social uses of beach precincts. However, these developers have ‘left their mark’ on the landscape in ways that can be difficult to adapt as cultures evolve and emerge.

The cultural landscape is described as a setting for ‘territorial cultural wars’ that take place over the legitimate uses of spaces and the definition of the social boundaries of those places that govern the status of insiders and the accommodation of outsiders, along with the distribution of values, costs and benefits of those spaces and places (Mitchell 2000).

The semi-permanence of the urban built form produced in the design processes of development is subject to processes of entropy as the built forms decay over time. However, the initial allocation of public and private spaces is less open to those processes of change. The layout of streets and roads has proven very resistant to change, with many layouts from thousands of years ago still affecting contemporary public spaces (Berman *et al.* 2007).

This situation of what has gone before restricting and affecting the future range of choices often results in a pattern of tension between private built product and public open spaces that will outlive the trends and fashions of the moment of initial development. This is illustrated by the recent development of Newport Quays in Adelaide, South Australia where the interests of the developer and state government circumvented planning procedures resulting in restricted public access to the waterfront marina (Wilson and Davidson 2011).

The beach precinct is often a compromised place in planning, with commentators on coastal development noting the plethora of government agencies and jurisdictions that are involved in shaping coastal development (Gurran *et al.* 2008; Beatley 2009; Sciulli 2013). This may explain why, although the landscape from the land to the sea is continuous and inter-dependent, this is rarely reflected in the design, development or management of beach precincts especially if the beachfront has had changes in jurisdiction or political oversight over planning during its development.

What may have been acceptable solutions for small coastal local governments in the 1920’s may not meet political and cultural preferences in the 21st century. However, the decisions taken at that time can still affect the range of options available to decision makers today.

1.5 Some Challenges facing the Gold Coast Beach Precincts

The governance of Gold Coast Beach Precincts faces a range of inherent challenges not found in other urban forms. These arise from their location, and their role as a transitional space from the inland built environment to the offshore natural environment. Their economic, social and environmental values are in a state of constant conflict over space and the importance so many attach to the fulfilment of their aspirational needs creates a contest for the control and use of the urban spaces adjacent to the ocean.

The beach precincts are the focus for an interrelated set of challenges that are likely to increase in magnitude. These challenges can be expected to exert increasing pressure on the beach precincts and contribute to conflict over resources that are a consequence of the current urban design of the whole city (figure 1.5). Although the challenges face the city as a whole, their effect is concentrated on the beach precincts, as it is from the beach precincts that people derive most of the recreational, restorational and activity benefits available to them.

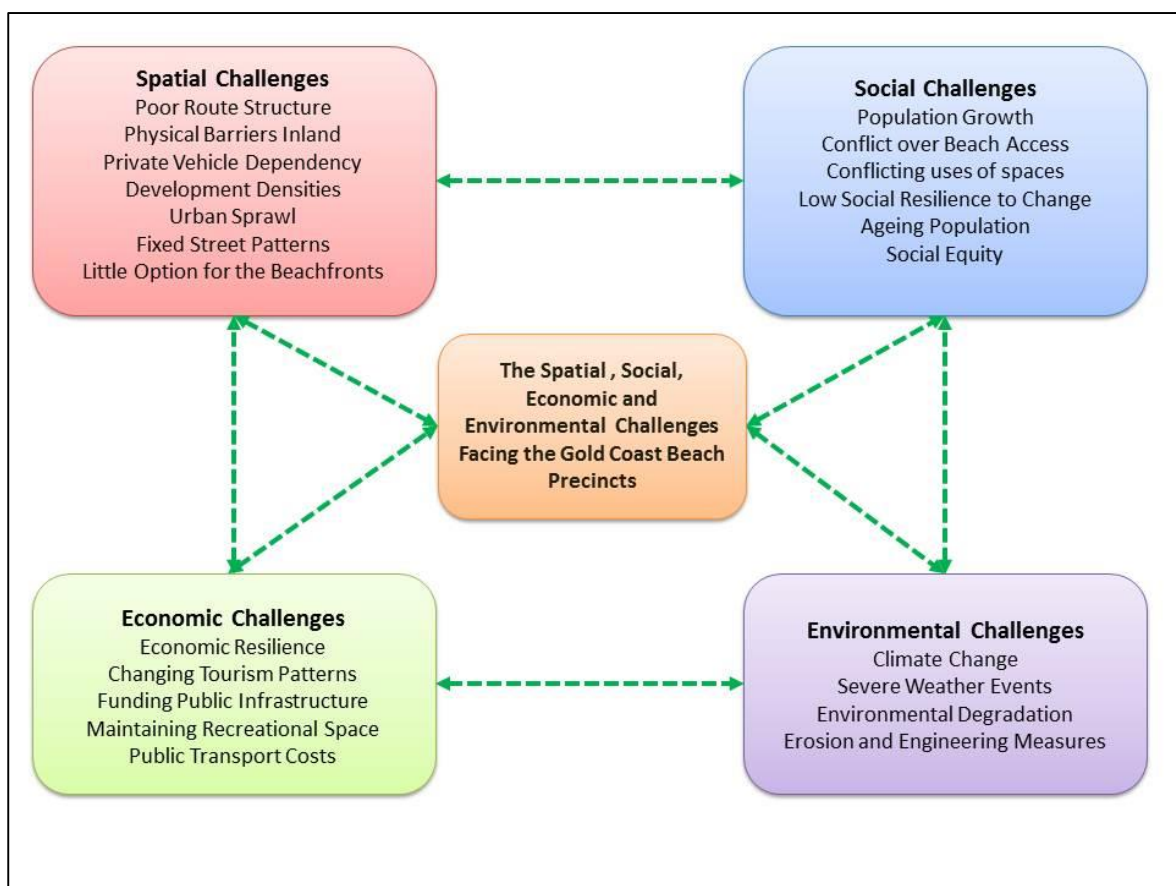


Figure 1.5 Challenges Facing Gold Coast Beach Precincts (Author 2010)

1.5.1 Spatial Challenges of the City that affect the Beach Precincts

The spatial problems of the Gold Coast City all relate to distance, time, population densities, the existing vehicle route networks and the location of available beachfront recreational spaces. The city is spread over a large area but its highest residential density is found along the coastal spine with a high degree of car dependency and sprawl as you move inland (Gold Coast Primary Care Partnership Council 2009). Figure 1.5.1 gives some idea of the relative distances that residents of the city have to travel to the beaches, the routes they can take to visit publically accessible beachfronts and the locations of the case study areas.

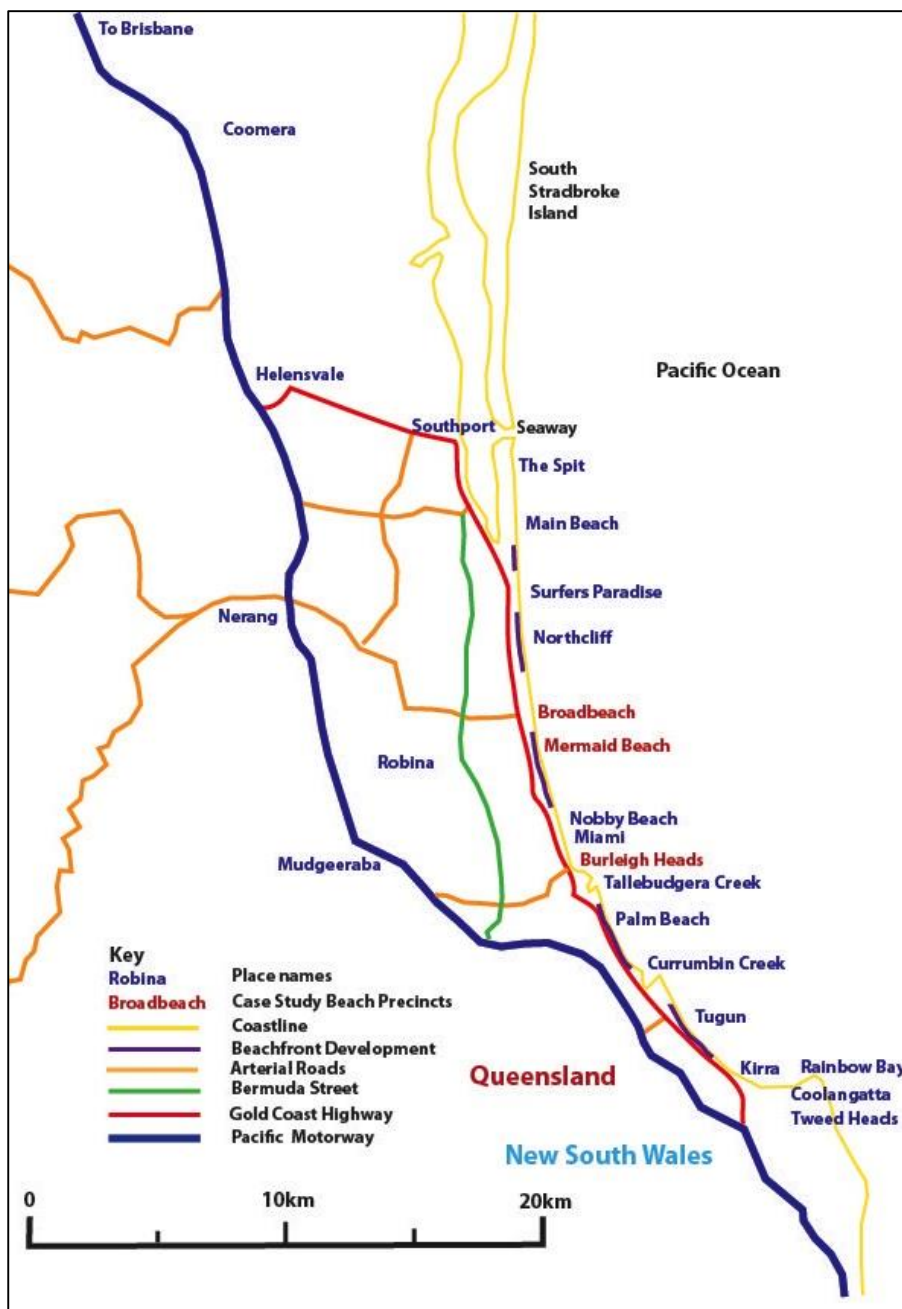


Figure 1.5.1: The Gold Coast: Locations and Major Vehicle Routes (Author 2013)

In terms of driving distances it can take over an hour to travel from the north to the south of the city. From the inland suburbs such as Nerang it is about twenty minutes' driving time to the coast. The arterial road system also restricts the options from the inland suburbs to the coast. Residents north of Nerang are channeled by the arterial routes to the publically accessible ocean beachfronts that are found at the Spit, Main Beach and Surfers Paradise. Residents around Nerang are channeled to Broadbeach. Residents south of Nerang are channeled to Burleigh Heads. South of Burleigh Heads the city narrows and most people usually live close to convenient or adjacent beachfronts. Coolangatta/Tweed Heads straddles the New South Wales/Queensland border with a relatively small developed hinterland and is effectively a single destination of choice for visitors.

This channeling of route choices affects all residents of the suburbs west of Bermuda Street. Residents east of Bermuda will use the adjacent beach suburbs if they have a publically accessible beach or travel along the Gold Coast Highway until they come to their nearest public beachfront. Generally only the residents east of the Gold Coast Highway have largely unrestricted access to their nearest beach. The linear and layered structure of the city has created a 'wrong side of the tracks' social environment, with the suburbs west of Bermuda Street and the Pacific Motorway being successively the least connected to the beachfront.

This engineered channeling of vehicle access to the public beachfronts creates competition for their use and also increases the exclusivity of the privatised beachfronts. The visitation pattern of the Gold Coast beach precincts reflects this design of access route and public/private beachfronts. Beach visitation rates are much higher to those destinations with public foreshore parklands, especially in the northern half of the city (Wake *et al.* 2008).

Poor public transport connections from inland suburbs mean that people who do not have or cannot drive a car are even less connected to the beachfronts than drivers. If they are reliant on public transport they can spend up to half a day travelling and even more if they miss a connection. The author found that sample journeys from Coomera, Nerang and Mudgeeraba by public transport to the nearest beachfront take at least 1 hour 38 minutes with up to two transfers and in some precincts a long walk from the bus stop (Translink 2013).

The disadvantage for residents of suburbs beyond the Pacific Motorway has been highlighted in studies conducted by Griffith University, with analyses suggesting that many people who live in these suburbs are disconnected from the benefits of living in the city and are also less resilient to mortgage, fuel and cost of living rises (Yigitcanlar, Fabian and Coiacetto 2008;

Dodson and Sipe 2005). This vulnerability is increased by their low levels of access to frequent and useful public transport. It should be noted, when considering access by private vehicle and public transport to the beach precincts, vulnerable communities are far less likely to be living in the higher priced beachside suburbs with easier access to the beach.

The spatial arrangement of the city makes the urban design and planning of the beach precincts with a foreshore parks a particular concern. There are only three major foreshore park destinations in the Gold Coast: Broadbeach, Burleigh Heads and Coolangatta and these are heavily visited (Wake *et al.* 2008). The residents of beach suburbs with foreshore parks are privileged as they can use them for the purpose of cycling to work as well as for social, recreational, restorational or exercise use. However, residents who have to travel from inland suburbs are more likely to visit them as a destination for social, recreational and restorational purposes.

The options for the Council to improve this situation are limited. The structure of the city consists of layers of physical barriers to movement created by the arterial route system, waterways and canal estates, and large golf courses which prevent the construction of alternate routes (Cartlidge 2008). These layers of physical barriers combine with lower residential densities and car dependency to reduce the viability of servicing the inland suburbs with a low cost, reliable, frequent and convenient public transport service (Pitot *et al.* 2005)

1.5.2 Social, Environmental and Economic Challenges that affect the Beach Precincts

The social, environmental and economic problems facing the Gold Coast are also consequences of the spatial challenges facing the Gold Coast. These include the inter-related challenges that come with population growth largely in places distant from the beachfront and the competition for recreational space that will increase over time (Australian Bureau of Statistics 2010b). A significant percentage of the population is also ageing and becoming less mobile and physically active. This lack of mobility is exacerbated by the lack of frequent, useable or direct public transport connections from inland suburbs to the beach precincts (Yigitcanlar, Fabian and Coiacetto 2008).

The Seachange Taskforce found that coastal communities outside the capital cities generally have the highest proportion of families receiving income support benefits, the highest median age and the highest proportion of low-income households (Baum *et al.* 2009). Many of the

occupations found in communities like the Gold Coast are in the retail, hospitality, tourism and care-giving sectors of the economy (Australian Bureau of Statistics 2004; Morris *et al.* 2009). Many of these jobs are seasonal, part-time and low paid. The financial resilience of these communities to economic stress is low, and their ability to meet unexpected charges or frequent increases in the costs of necessities is poor (Baum, O'Connor and Stimson 2005).

The most disadvantaged populations in the Gold Coast also tend to live in the least connected western inland suburbs of the city (Baum *et al.* 2009). With physical isolation, poor health, less public social infrastructure, higher unemployment and lower income levels, the residents of the inland suburbs have less financial resilience or social capital to cope with adverse economic or other changes in society. They also have the worst levels of connectivity or choice to the restorative beachfronts. The implications for social equity and cohesion are made worse by a seeming focus of government on the coastal strip for active living initiatives, social infrastructure, tourism and transport (Bajracharya and Khan 2012).

The growing populations of the Gold Coast will also increase the existing competition for relatively limited space to meet the needs and desires of the local and visiting users of the beach precincts. The city has a fixed quantum of beachfront. Nearly half of it is already restricted for public access by having had homes, resorts and apartments built upon it (Wake *et al.* 2008).

The lower income groups living in the inland suburbs of the city will be more affected by issues of access and connectivity than coastal residents and will benefit less from the spending on public infrastructure along the coastal spine such as the Gold Coast Rapid Transit line and foreshore park improvements (Translink, Gold Coast City Council and Queensland Transport 2009).

Many people seek to visit beaches and their adjacent beach precincts for the purpose of releasing tensions built up in their lives (Berman, Jonides and Kaplan 2008). The natural environment has been shown to have many positive physical and health benefits. The beach precincts, where there are people of all ages and social groups, can be seen as a key resource in alleviating stress and conflict and managing a civil society (Gleeson 1999; Rosenberger, Bergerson and Kline 2009).

Turning to environmental challenges, the appearance of the beaches of the Gold Coast are not as natural as they appear to be. They are cultural landscapes created by the politics of

development on the foreshore (Macdonald and Patterson 1984). Coastal engineering with rock walls, groynes, erosion barriers, offshore revetments and breakwaters, sand pumping, dredging, beach cleaning and sand replenishment are the factors that create the appearance of the beaches of the Gold Coast (Griffith University Centre for Coastal Management, 2012).

The Gold Coast City council continues to approve major development on the beachfronts, which are at risk to climate change and adverse weather events, and rely on a rock wall and a narrow strip of sand to protect private and public infrastructure (Bartsch and Oberhardt 2011). The Gold Coast has been identified as one of the local government areas most at risk from the effects of climate change (The Department of Climate Change 2009). The costs of the multiple projected risks of sea level rise and severe weather frequency are dependent on severity of those changes but are unlikely to be less than billions of dollars to public and private interests (Steffen *et al.* 2012).

Recent events in the Queensland Floods of 2011 are instructive. They tend to confirm the cost to society of inappropriate planning regulations and processes that favour the economic benefits over the social, cultural and environmental costs. In the case of the Brisbane flood events, Gescheit (2011) commented that the planners were not as knowledgeable about the risk management process as they should have been.

Hardening the coastline behind concrete walls is likely to impact on those values that attract people to live and visit the city in the first place. Intangibles such as beach widths and views, changes to surfing conditions, reduced attractiveness of a hardened coastline to tourists and day visitors, reduced market value of coastal properties could all affect the city in related and as yet unforeseen ways (Kirkpatrick 2011). There is also a potential for the degradation of the natural ecology of the coastal zone, with an attendant range of environmental, economic, health and social risks for the city (England 2007).

The challenges to the sustainability of the Gold Coast beach precincts listed in this section are some of the compelling reasons for the city to give special consideration to the spatial arrangement, urban design and planning for its beach precincts to achieve their long term cultural, economic, environmental and social sustainability.

1.6 The Research Goals of the Thesis

An important consideration in considering the research goals of the thesis is that development in coastal cities like the Gold Coast has spatial relationships unlike those found in the cities which have provided the majority of urban design analysis, theories and guidelines. The spatial relationships described between the natural and the built environments and the core and periphery of the city form in those theories does not recognise the importance of incorporating public access between the natural and built environment of the linear coastal city beachfronts.

The study focuses on the development of the spatial relationships and arrangement of public spaces in different places along the Gold Coast coastline. It intends to contribute to the narrative on urban design theory of coastal cities and the creation of policies and guidelines that mediate the spatial and physical characteristics of place to meet the individual, social and cultural needs of the users of beach precincts for activities and behaviours.

The development of a typology of the beach precincts found on the Gold Coast will be based on their spatial arrangement of land uses, physical characteristics, public access to the beach and walkability. It is intended to allow the selection of appropriate case study areas to examine the way different spatial configurations affect people's use and enjoyment of the different types of precinct. Because of the physical similarities of the spatial arrangement to other places around the world with similar development patterns, it is intended that the typology can be generalised to other places outside of the Gold Coast.

The different types of beach precincts found on the Gold Coast are used to investigate the design of the public realm of beach precincts. The role that urban design has in making different places useable for activities and to meet the usage preferences of the different demographic, social, cultural and special interest groups who come to use them, can be explored in a contemporary context in the different spatial arrangements, urban design and planning that exist in different Gold Coast beach precincts.

The similarities and differences in opinions and beliefs that different groups bring to the cultural creation of spaces and places will be revealed by examining the relationships between expectations, preferences and perceptions of beach precincts that individuals and groups have. These results can be compared with the expectations, preferences and perception of urban designers, planners, developers and other professionals who have a role

in the design, provision, regulation and management of the precincts. This may reveal the way that different groups in society operationalise their political and cultural agendas.

The study will also examine the nature of the social and cultural conflict over public access to the beach from the adjacent beachfront development and in the public space network of the beach precinct. This is intended to identify the benefits of different spatial arrangements of the precincts. This may also reveal who benefits from those configurations and if any groups are disadvantaged by their current design, planning and governance.

This research is also intended to support the decision makers in small coastal settlements to select appropriate urban design and spatial arrangements for their beachfront development that can sustainably accommodate growth and future social and cultural changes.

In Queensland alone there are 35 coastal councils from small shires to regions and cities with responsibility for the nature of development along the coast. Around 85% (3.8 million people) of the population of Queensland also lives within an hour's driving distance of a beachfront (Zeppel 2011). This research is intended to contribute to debate on what is appropriate to the context and character of coastal development to achieve the highest and best uses of this valuable land from a cultural, restorational and social use perspective.

1.7 The Research Question

To achieve the research objectives the thesis requires an understanding of how people perceive, respond to, and use the social, recreational, restorational, natural and built environments of the different types of beach precincts of the Gold Coast.

In forming the overarching and supplementary questions the researcher is seeking to focus on the relationship between attributes and characteristics of specific places and the values that people ascribe or attach to them. In order to achieve this, the research question's overarching question of the case study will ask what the attributes and characteristics of the beach precinct are and how people use and relate to them. As Flyvbjerg (2004) has observed 'Asking 'How' and conducting narrative analysis are closely interlinked activities'.

The initial overarching question addresses the main purpose of the study. This is the link between the characteristics and attributes of the urban design of the precincts with the user

and interest groups expectations and preferences for the public realm of the beach precinct. This overarching question is:

How well do the urban design attributes, characteristics and values of selected Gold Coast beach precincts meet the expectations, preferences and values of the different user and interest groups?

An adaptation of a framework originally created by David Canter (1983) can be used to further shape the inquiry and form an understanding of the authentic place experience of people through the aggregation of the place features that transform spaces into places. This approach uses the inter-relationship between three components:

1. The physical features of a place
2. The meanings that people associate with the space and
3. The behaviours of people in that space (Canter 1983)

Canter (1983) suggested that the first step in the process of understanding place experience is to identify and categorise the major physical components of the place being investigated and then identify links between these physical components and associated meanings and behaviours. This can lead to a synthesised holistic understanding of the user's place experiences.

This construct is called a 'purposive model of place' and Canter (1983) suggested that the degree to which an environment is considered to be a place will be conditional on how well the place meets the needs and the intentions of a person in a particular place. Canter's purposive model of place has been adapted to develop the supplementary research questions to build layers of understanding of beach precincts relating to their preferred uses (Figure 1.7).

This approach has been used in planning (Nelessen 1994), environmental behaviour (Min and Lee 2006), recreational place (Fishwick and Vining 1992), and landscape perception studies (Green 2010). Understanding the responses of individuals and groups towards the urban design attributes of the beach precincts requires a mixture of research methods that can elucidate and illuminate the complex layers of people's psycho-spatial responses to the natural, recreational and built environment.

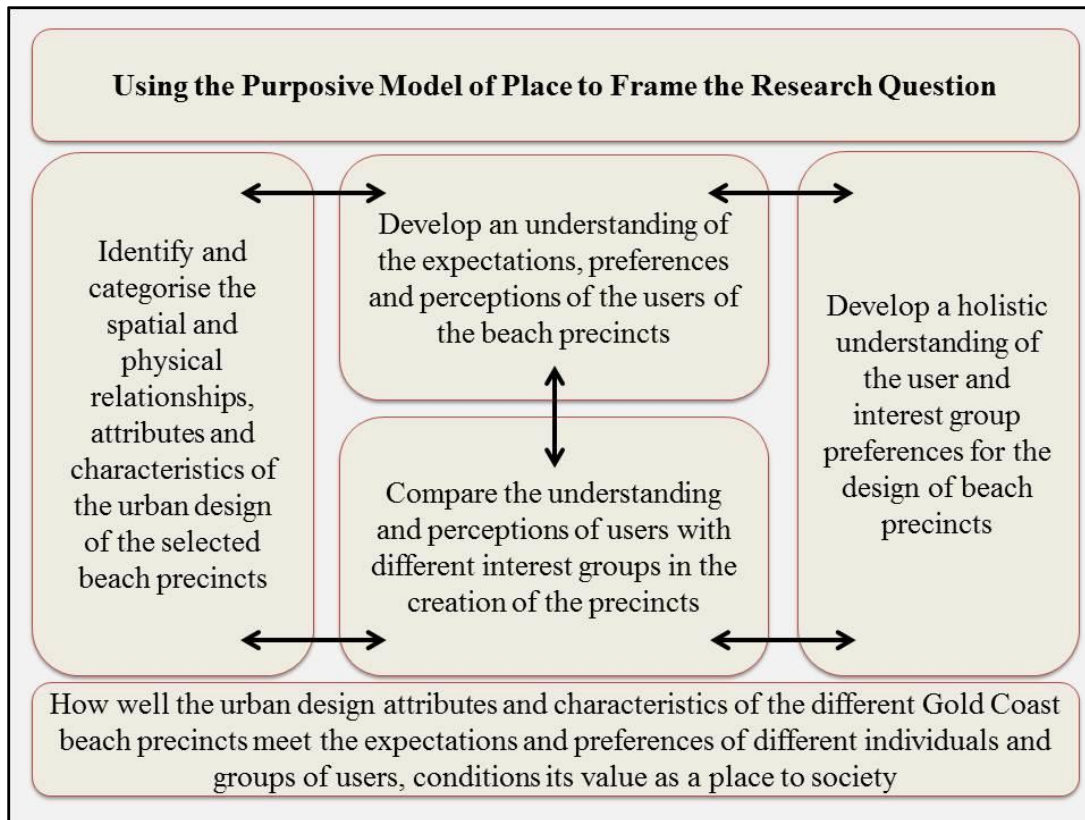


Figure 1.7: Framing the Research Questions (Adapted from: Canter 1983; Green 2010)

When applied to the overarching question the adopted framework creates specific lines of inquiry that can be used to guide the research strategy of the study. To identify and categorise the spatial and physical relationships, attributes and characteristics of the selected beach precincts the physical features of place will be examined using the following two questions:

1. *What are the spatial and physical relationships in the different types of beach precincts on the Gold Coast?*
2. *What are the urban design attributes and characteristics of selected Gold Coast beach precincts?*

To identify and categorise how well the different types of place meet the purpose of use by the public, the study creates two classes of individuals or groups, the beach precinct user for their behaviours and activity in the precincts and the professionals who have a role in the design, planning, development and governance of those beach precincts.

The information gathered will then be used to compare the understandings and perceptions of place to create multiple lived and conceived realities of place from the viewpoint of different

groups who are culturally using, contesting and creating the beach precincts. This in turn will create a layered, interrelated and holistic understanding of different people's meaning of place and the behaviours they would like to enact in that place to meet their expectations and preferences for individual, social and cultural behaviours. These meanings and behaviours will be investigated using the following guiding questions.

3. What expectations, preferences and values of the public realm of beach precincts are held by different user and interest groups?

4. How well does the urban design of the public realm of different types of beach precinct meet the preferences and values of the different user groups of those precincts?

1.7.1 The Limits of the Research

The limits of the research are determined by the boundaries of the research question, suitable methodologies, and the skills and means of an individual researcher. The research is set in three selected Gold Coast beach precincts. The circles of concern of this research are illustrated in the following diagram (Figure 1.7.1).

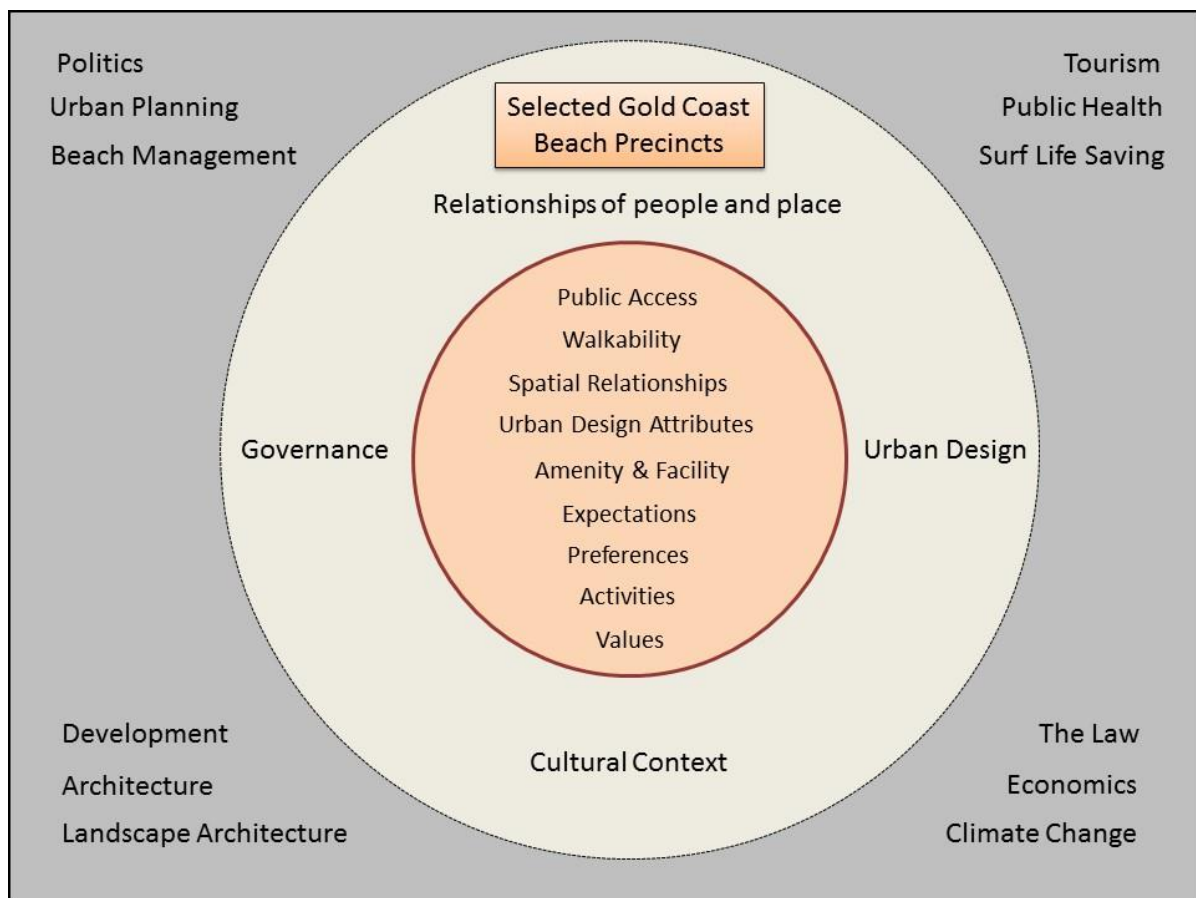


Figure 1.7.1: The Boundaries of the Research (Author 2012)

The core concerns for the research are within the central circle. The areas that are expected to most affect the core concerns are within the outer circle, and the areas that are likely to affect the areas of concern, but for the purpose of this research are peripheral, are shown outside the circles of concern. This hierarchy is necessary to confine the study to manageable proportions.

The core concerns of the research will be oriented towards the needs and desires of the walking visitor to the precincts, in particular, the walkability of the precincts and the degree of public access to the beach. The design of a 'walk through urban design analysis' (section 4.1) will draw on, but not be dependent on, professional opinions. This is because as Fitzsimmons *et al.* (2010) observed there is no professional agreement on the concept, measurement and degree of importance of different characteristics of the built environment that contribute to the walkability of a place.

Urban design is inherently a political process as Lefebvre stated: *There is a politics of space because space is political* (Lefebvre, 1978: 345, cited in Butler 2009) and the governance of the public realm is driven by the narratives of conflict for the control of space. The permissions given for its use are inherent in the policies and practices of different levels of government. A political process occurs from the decision to plant dunes along the foreshore to the design, provision and siting of a children's playground.

The analysis of the political decision making associated with the spatial relationships and arrangements of facilities and access to amenities is expected to be an important factor in the urban design analyses of the different beach precincts. Development and planning are subject to narratives of personal, professional and corporate economic gain that are both local and global in their scope and nature (Salazar 2010). However, the thesis will avoid being drawn into the often obscure and byzantine political processes that led to those decisions and will consider the empirical evidence from the viewpoint of what is visible to the outsider (Uzzell, Pol and Badenas 2002).

There is neither an implied hierarchy nor degree of equality in the listed areas of concern or topics in the research. It is expected that some of the attributes, characteristics and values that will be investigated will vary in the degree of importance to the design of urban beach precincts from context to context.

Each of the research chapters will follow a pattern of review, design, research and reflection. The literature review in each chapter will aim to clarify the boundaries of the research topic,

build an understanding of the most relevant fields of knowledge that allow an interpretation of the topic and determine a suitable research design and methods of inquiry (Hart 2007).

The literature reviews will take place as the research progresses. When the research design in each section is completed there will be no further literature searches into the topic until the findings and research are discussed in the final chapters. This means that any relevant literature that arises after the latest dated reference will not retrospectively be included in the review for each chapter.

As a consequence of the research questions there is an implicit need to identify the factors that affect the articulation of space, place and people in an environment which transitions between and occupies the space between the natural and built environments.

1.7.2 The Contribution to the Theories of Urban Design and Planning

A major research outcome of the thesis is expected to be a holistic picture of the relationship between the design of the public realm of beach precincts and the social usage of the spaces and places created by that design. This purposive use of space and place research is expected to inform the design and planning of beach precincts in Australia. Guidelines and policies may be created by the author and others to inform beach precinct and foreshore renewal projects.

This research examines the needs and desires of people to access nature within an urban environment. The design of beach precincts has values associated with it that make it akin to the design of spiritual buildings with the arrangement and alignment of sacred and profane places (Tuan 1977). The beach precinct is a place where people often congregate to participate in recreational activities. However, many people come to commune with nature and enjoy the experience of place, either in groups or as a solitary experience (Beatley 2010).

Much urban design theory is formed by empirical observation of place, social, technological, cultural and political change or from philosophical paradigms. It has evolved from the study of particular places at particular times such as twentieth century New York (Jacobs 1961), and Boston (Lynch 1960), the nineteenth century cities of Europe (Sitté 2006) or the medieval towns of Europe (Alexander *et al.* 1987).

These urban design theories have tended to take the streets, public spaces and buildings of that city and generalise theory from those places. Hence, there is more known about streets,

parks and piazzas than beachfronts. However, with a social and cultural trend towards an ecological phase of development that values health, nature, tourism, recreation and lifestyles, the beach precinct offers a timely opportunity to generalize from a specific case of coastal city development.

Globalised investment and regional planning practices are accused of being responsible for the local sense of place being replaced with a sense of being from anywhere (Kunstler 1994). These practices can result in inappropriate models of development being applied in a repetitive, standardised fashion to distinct local cultural landscapes. This in turn is an important consideration for the intended tourists who are offered products with an indistinguishable, internationally flavoured sameness.

It is also expected that the research will inform urban design research of the typology and morphology of coastal urban design theory and relate it to purposive use of place. This may strengthen the theoretical grounding to allow urban design analysis of coastal development to include a use and activity place-making approach. It is also foreseeable that this research will also contribute to theoretical frameworks for the urban design of beach precincts.

1.7.3 The Contribution to the Practice of Urban Design

The identified audience for this research are practitioners in the design, planning, building, and governance of beach precincts including urban designers and planners, architects, developers, builders, environmentalists, property and development lawyers, government officials and elected representatives who contribute to the decision making process on coastal development. The research topic is poorly represented in peer-reviewed publications and the research begins to correct the lack of focus on beach precincts in the literature.

This research is intended to inform the design and planning of coastal settlements that are now, or likely to become, urban beaches. It is not intended to address the concerns of beaches that are unlikely to be developed due to their location, or nature. Those beaches have attributes, characteristics and values where environmental concerns are more likely to be naturally dominant.

The study will build an understanding of the role of urban design in the creation of public access to the natural environment of the beaches. The study will analyse how the urban design attributes of beach precincts of the Gold Coast City allow, restrict or enhance public

access to the beaches. It will identify the spatial arrangements that reduce or intensify tension and conflict between the different users of the public realm.

O'Hare (1999, p10) identifies small coastal communities as lacking the expertise of qualified urban designers. He sees this as problematic given that urban design is not a statutory concern in urban planning. Because small coastal towns can evolve into larger towns or cities, this results in patterns of development occurring that have poor sustainability. These small towns also tend to use outside consultancies that do not have an in-depth local perspective. The research may be useful in assisting those small local authorities to prepare plans for coastal settlement and development patterns that have the potential for future growth.

The study aims to contribute to the understanding of the use and meaning of place for different people, through the urban design of the spatial and physical attributes of beach precincts. The expectations, preferences and perceptions of individuals and different groups of users of the public realm of the beach precinct will be investigated. These will be related to specific urban design, spatial and physical attributes of the public realm of the precincts. Through this process there is an intent to identify some of the significant values that people associate with attributes of place.

The urban design attributes, characteristics and values of a beach precinct are not explicitly covered by the existing theories, research methods and practices of urban design. They come from a range of fields including cultural landscapes, environmental science, environmental psychology, urban planning, architecture, sustainable development and beach management.

1.7.4 The Contribution to the Practice of Urban Planning, Research and Education

The research is intended to inform the debate on the urban planning of beach precincts and to make the case for specific planning rules to apply to beach precincts that do not arise from generalised planning practices but are specific to the spaces and places of beach precincts. It may also contribute to the way that research is conducted in this special case of development and add to the general education of decision makers in local government.

The beach precincts are seen as an important part of the Gold Coast City Council's (GCCC) response to these principles, acknowledged in the Bold Futures Project as one of nine key areas of development of the Gold Coast (Wake *et al.* 2008). A report for the visitor economy of New South Wales government also found the coastal and beach experience was the top state attribute associated with Queensland, whereas, for New South Wales, nightlife was the

top state attribute and for Victoria it was shopping (Department of Trade and Investment, Regional Infrastructure and Services 2012).

The Queensland State Coastal Management Plan (Department of Trade and Investment, Regional Infrastructure and Services 2012) emphasises the opportunities for public access to the coast to be maintained and enhanced, consistent with the conservation of coastal resources and public safety. It recognises the principle of the public expectation to access the coast from land and sea. The beach precincts are also an important part of the access to the coast for a significant proportion of South East Queensland residents (Department of Environment and Resource Management 2011).

1.8 The Research Strategy Adopted for the Thesis

In researching a problem that contains the design of a place, the people who use it and their preferred activities and observed behaviours, the research design needs to bridge different fields and methodological preferences of research. The nature of the search for knowledge and understanding to answer the research questions can be explained with Karl Popper's viewpoint that objective knowledge is built from combining and constructing three worlds of research (Popper 1978).

The 'first world' is the physical world of spatial arrangement and objects such as the different beach precincts that can be examined, measured, related to each other and objectively described. The 'second world' is the world of the human mind, mental states, ideas and perceptions that need a range of different research methods and rely on the observation of phenomena of activities, commentaries and behaviours. The 'third world' is the world of the products of the human mind, academic articles and books, online media such as news articles and opinion, blogs and organisational web pages, film, television, plays and paintings.

This research position reflects the author's acceptance of the notions that beach precincts are both a fixed reality that we can detect and measure and that their creation, design and use are an essentially anthropocentric, social, political and cultural construct. An important facet of this is that beach precincts, in common with other urban forms, are created in a particular space along a continuum of time. The use of those spaces is determined by historical and contemporary social constructs that are constantly being reformed and restated depending on the dominant contemporary political cultural paradigm (Castells 2006).

The case study strategy is a particularly useful research approach in the context of this study. It can be used to cover the unique characteristics of the differing types of precinct, where there are many more physical and social variables than data points. The context of the research is a real life contemporary phenomenon, where the boundaries of the problem are not clearly evident and multiple sources are necessary to build a holistic understanding of the problem. This meets the description of a case study as explained by Robert Yin (2009).

Qualitative research is characterised by focusing on context and uses multiple methods that are interactive and humanistic, and is fundamentally interpretive in nature (Marshall and Rossman 2006: 3) The research strategy used in this thesis is to conduct an exploratory and inductive case study that inquires into the patterns and relationships, themes and categories of use and activity that people associate with the different types of places found in a beach precinct (Patton 2002).

According to Yin (2009: 27) case studies have five components. In this thesis these are interpreted as:

1. the questions which, in this thesis, are formed from the application of Canter's (1983) conceptual framework which combines the way that people associate meanings and values with the physical features of a place (section 1.7),
2. propositional constructs (section 1.8.2) that arise from the overarching and supplementary questions,
3. the units of observation and analysis (section 1.8.1),
4. the logic linking the data to the research questions and propositions which, in this thesis, will be enacted using a method of inquiry developed by Tuan (1974) for the examination of the environmental perceptions and values of place that organises the rich data expected to be revealed in the course of the research (section 1.8)
5. the criteria for interpreting the findings which places the role of identity into the analysis of power relationships surrounding the politics of governance of use and activity (section 3.0.1) (Flyvbjerg 2004; Castells 2009).

The case study design used in this study utilises multiple sources of evidence to build a matrix of data (Yin 2009). The analysis of the data will consider the degree to which the urban design principles and spatial and physical characteristics meet the expressed

expectations and preferences of identified locations of the public realm in those precincts. The typological and urban design analysis will in turn be reviewed by professionals who design, plan, provide and manage the precincts. If necessary this review stage of the study will allow the modification of the line of inquiry.

The case study areas will be chosen after the typological analysis of the beach precincts of the Gold Coast. The strategy for selecting the case study areas is intended to achieve a representative sample of the common types of beach precinct found on the Gold Coast. This will include the selection of beach precincts that are typical and problematic (Flyvbjerg 2010) in terms of public access to the beach from the foreshore. Each of the case study areas will be physically centred on a Surf Life Saving Club (SLSC). The choice of an SLSC as the centre for the case study is an important one as they are regarded as safe and desirable swimming places (Surf Life Saving Australia 2009) and are taken to have a social, cultural, and economic significance (Wake *et al.* 2008; Kirkpatrick 2012) in the historical development of the Gold Coast.

The approach taken in the study aligns the opinion of key informants with the attributes of the specific places to be studied, the desirable urban design attributes and characteristics, and the expectations, preferences and perceptions of people using the case study areas. The chosen multiple case research design is expected to have a degree of generalisability to other beach precincts in the Gold Coast and cities with similar sets of spatial and physical characteristics of precincts. The reliability of the study will depend on the operational steps being clearly described and thus replicable in future studies of beach precincts. These operational steps include the research questions and propositions; the physical units of observation and analysis; and the research framework and methodologies adopted (Yin 2009: 27).

1.8.1 The Units of Observation and Analysis for the Research

The units of observation will be the Gold Coast beach precincts and the units of analysis will be the individuals and groups observed to be active in the selected beach precincts and representative professionals drawn from the fields of urban design, planning, architecture, governance, landscape architecture, development and active use of the beach precincts. Data will be collected from documentary reviews, and the identified typological places of the public realm. The measures of urban design will be the selected urban design principles and their attributes and characteristics. The Data collected on people's reported and observed purpose of visit and professional opinions will be the units of social analysis.

The Physical Dimensions of the Units of Observation

For the purposes of this study the beach precinct has been defined by the researcher as a space with dimensions that are aligned with the shoreline 140m inland and 250m along the shores with an approximate area of 3.5 hectares. This gives a walkable space that can conservatively be traversed in any direction in approximately two minutes (Knoblauch, Peitruca and Nitzburg 1996). At this chosen scale it is possible for the observation points of use and activity to be visible in the distance from at least one other observation point. The precinct will be centred on a social node and will include the observable beach.

1.8.2 The Research Propositions

The propositional constructs for the urban design characteristics, spatial orientation and arrangement and the expectations and preferences of the beach precinct users, designers, planners, developers and those responsible for the governance and management of the case study areas are:

- The typographic elements of the beach precinct in this thesis are those natural and built attributes that would allow for beach precincts to be classified ontologically by type into classes or sets of beach precincts.
- The design solution for the built environment of the beach precinct has parameters that are contextualised by the typographic spatial arrangement and orientation of the typographic elements to beach access and beachfront.
- The chosen design solution of the built and natural environment in the particular case of a beach precinct is predictive of the opportunity and choices for activity and behaviour in the beach precinct to fulfil the needs and desires of visitors and residents of that beach precinct.
- The design characteristics of the specific beach precinct will be related to the nature of the responsive relationship of the built environment to the natural environment and valued features of beachfront such as views and the opportunity to relax and restore.
- The common features of the natural and built environment of different beach precincts will allow for the relationships of the built environment to the natural environment to be investigated with a degree of generalisation and comparability for the case studies of the beach precincts.

In this thesis the values of the beach precinct are the concepts of worth that individuals or groups hold about the design, management and use of the beach precinct. These values can be seen as dominant to recessive, extrinsic or intrinsic, explicit or implicit, agreed or contested. They will be temporally and phenomenologically described and will be characterised by type as: cultural, design, economic, environmental, governance or social values.

Of particular interest in this research is the possible differentiation and separation between the values of the public, represented by the different user groups of the precinct and the values of the decision making groups in the design, planning, building and governance of the beach precinct; and, the effects that the different values may have on the design and use of the beach precinct and the demographic or special interest groups they favour.

1.8.3 The Adopted Research Methodology

Tuan (1974) sets out the relationship people have with the natural and built environment through their perceptions, attitudes and values and how these contribute to the world-view people adopt of themselves and their environments. Tuan hypothesises that there are universal traits in the way people structure and perceive the world. However, cultural values modify perception and attitudes towards the environment, the wilderness, the countryside, the suburbs and the city.

Tuan designs research into the topic by assuming that people have genetically predisposed tendencies to particular landscapes (Falk and Balling 2010). These tendencies can be modified by an individual's experience of place and the social and cultural values that influence their perspectives (Home, Bauer and Hunziker 2010). These modified values are expressed in people's expectations and preferences for place and activity that, in turn, are influenced by how well people's preferences are met through the use of those places; this then modifies people's attitude towards those places (Herzog, Kaplan and Kaplan 1976).

It's a difficult task for a researcher to quantify the intricacies and multiple possibilities and variations in cause and effect in the way behavioural, physiological and psychological mechanisms holistically affect the connection of people to a particular place. Tuan (1974) identifies an anthology of causes and effects creating difficulties for researchers in interpreting the way people respond to particular places. Knowledge of the way people act or behave in particular ways in shopping centres, beaches or town centres can be built from observations. However, the influences on those behaviours and actions are often unknown.

Tuan (1974) recognises this methodological dilemma of constructing connections between people and place and the infinite causality and effect of that relationship. This dilemma is approached by not having a single all-embracing concept to guide the research but to structure it through a limited set of concepts. To conduct relevant research to address this topic Tuan sets out a method of inquiry to have the following features:

- use the different levels of individual, group and species to examine environmental perception and values about place;
- keep culture, topophilia and environment as distinct as possible to show how they mutually contribute to the formation of values;
- introduce the concept of change to examine the impact of cultural change towards environmental attitudes;
- examine aspects of the built environment through a dialectical analysis (Pinto 2001);
- distinguish different types of environmental experience and describe their character.

In a modest way this research uses Tuan's approach by:

- distinguishing different types of spatial arrangement and orientation of beach precinct environments to describe their character;
- examining the informal public narratives to analyse the discourse for meaning by textual analysis of the narratives surrounding public access to the beach and activity as key aspects of place;
- using observation to examine how people behave in the public spaces of the beach precinct in relation to the identified characteristics of the different types of beach precincts;
- inquiring into the preferences of individuals for the preferred urban design characteristics and pattern of activities of beach precincts, and
- inquiring into the beliefs and opinions of professionals about their preferred urban design and governance of beach precincts.

The research will triangulate between convergent sources of evidence from a typological and urban design analysis of the precincts, a literature review of public space, urban design guidelines, environmental behaviour, coastal and beach management. Data collection will take place in two phases. The first phase will be a typological and urban design analysis,

literature review, non-participant observation, a beach use questionnaire and photographic visual preference survey. This first phase will be used to form questions for the second phase of the research through a Delphi group of informed experts from different interest groups representing the urban design, planning, development, management governance and use of beach precincts.

Individual and social desires, needs, expectations and preferences will be investigated by field observations, public questionnaires and in the academic literature. It is intended to support this approach with textual analysis of the written and pictorial material produced in newspaper articles, blogs, single-issue web pages and other sources. These may be addressed as a range of related topics such as public beach access, foreshore development and renewal projects, cultural, recreational and sporting activities. These sources can be used for a textual analysis of the meanings diverse people attach to the beach precincts and their relationship with the natural and built environments of different beach destinations.

In using various ‘non-academic’ sources it is expected this will reveal how people feel about the beach and adjacent development, what they like or dislike about beachfront places, what they want to do there, and what their attitudes are about the supportive infrastructure, design, uses and activities they prefer in beach precincts (Rapoport 1982:11). Likewise, the degree of fit of expectation and preferences to particular beach precinct place or space, the spatial arrangements and orientation of the public and private spaces of beach precincts will be examined using the same set of methods.

The expected data produced will be complex and layered. To reduce the confusion that such diverse data can produce, the line of inquiry will focus on the selected urban design attributes and characteristics of the spatial and physical characteristics being examined. This will seek to align the practical nature of the expectations and preferences that user and interest groups have of these attributes and begin to define the perception and preferences that people hold.

1.9 The Structure of the Thesis

The thesis has been structured to support the research strategy and methodological approached outlined in the previous sections. Figure 1.9 illustrates the initial case study research framework. This shows how the study takes the research questions and uses them to define the topic boundaries and research methods. This approach aligns the analysis to the overarching research question and the specific lines of inquiry into the urban design, spatial

and physical relationships of the public realm of different beach precincts. It also relates the attributes and characteristics of place to the expectations and preferences of the different users and groups for the purposive use of place.

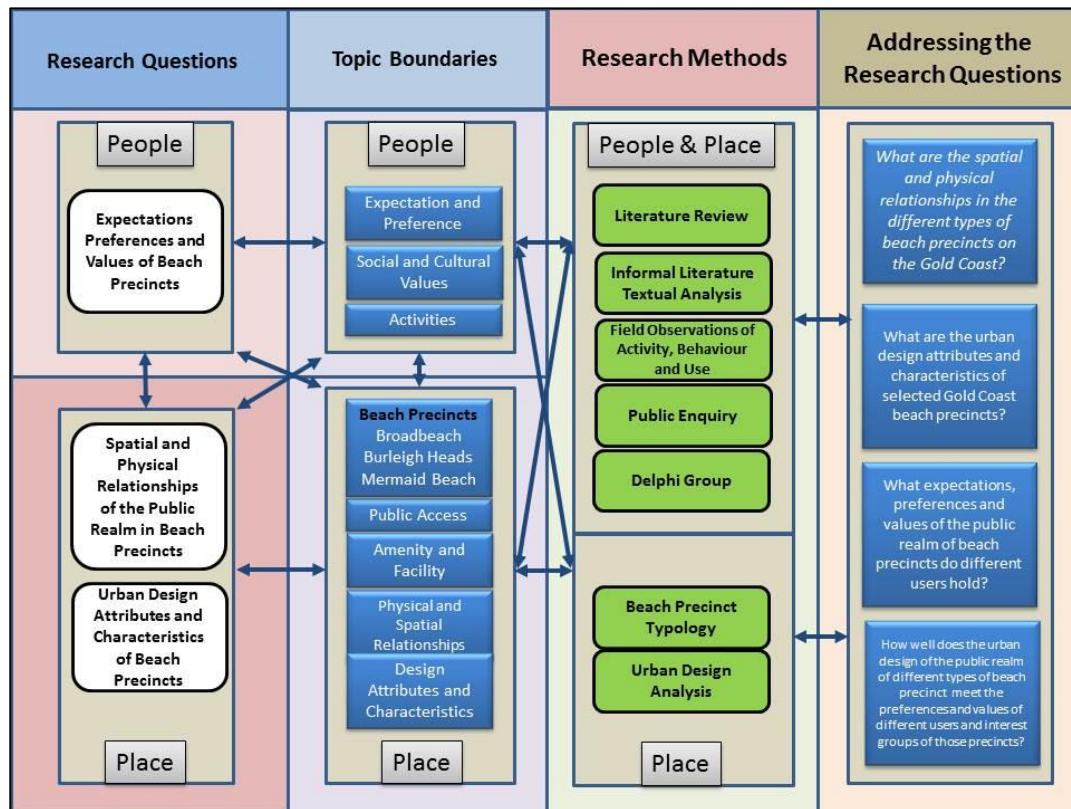


Figure 1.9: Initial Case Study Research Framework (Author 2012)

The overarching research question created four subsidiary questions to inquire into the different spaces and places and their relationship with people. Two of these questions examine the spatial and land use typology of the chosen case study areas and their observable urban design attributes and characteristics, degree of public access, amenity and facilities to support the purposive use of the precincts.

The other two questions seek to understand the meanings that people attach to spaces and places and their preferred behaviours there. These questions are related to each other and help to define the topic boundaries of the questions, such as what people's expectations and preferences for beach precincts are; what social and cultural values they hold for the spaces and places of the beach precinct and what activities occur in the different locations, spaces and places of the precinct.

The research methods are largely determined by the research questions and topic boundaries. Appropriate research tools are selected to examine the way the urban design and spatial

typology of the different beach precincts affect individuals, and different demographic and/or special interest groups' relationship to and use of the public spaces and places of the precincts.

The analysis of the research will be organised to align with the research questions to help answer those initial questions and reveal how different beach precincts meet or fail to meet the intent of purposive use of place of different people and groups.

1.9.1 Organisation of the Thesis by Chapters

The initial case study research framework, which aligns the research questions to the topic boundaries, research methods and analysis, is used to organise the thesis and its chapters and this is summarised in figure 1.9.1. Briefly, Chapter One locates the research problem in its contemporary and historical context, sets out research objectives and questions, the research framework and methodological approach employed and the structure of the thesis. Research methods and methodology will be examined, explained, selected and discussed throughout the thesis as they become appropriate.

In Chapter Two, the literature of urban typologies will be reviewed to reveal how coastal, tourism, urban, beach and transitional typologies of place are constructed and what attributes, characteristics and values are associated with them (section 2.1). This will assist in identifying how they classify spaces, places, natural and built environments and their associated uses and activities.

The most suitable elements of these typologies will be selected and assembled to create a typology of urban beach precincts (section 2.2). This will allow the identification of suitable case study areas for the study (section 2.3) and locate the field observations in similar places in each precinct (section 2.4). The typology will then be employed in a contextual and typographic analysis of the selected beach precincts (sections 2.4.1/2/3/4/5/6).

Chapter Three will review the theories of cultural landscapes and the meaning of place to begin to answer 'how well the spatial arrangements and urban design attributes in each type of precinct meet different individuals' and groups' needs for their purposive use. This chapter will establish how the research will identify the roles and identities of a polyphony of individuals and groups (section 3.0.1). It will then examine the identity, focus, goals and values of historical and contemporary individuals and groups as they are articulated in urban design theory and urban design guidelines in order to select suitable urban design principles for the analysis of the case study areas (section 3.1).

Organisation of the Thesis

Chapter One: Conflicts in the Design and Use of Gold Coast Beachfronts

Describing the nature of the conflict found in beach precincts that relates to the urban design of place and their purposive use by individuals and groups.

Proposing the research goals and questions to examine the urban design of place and how it meets peoples purposive use

Designing a research strategy to examine the attributes, characteristics and values of the purposive use of place.

Chapter Two: Typology of Urban Beach Precincts

Reviewing the literature of urban typologies.

Surveying the different types of beach precinct found on the Gold Coast

Designing a suitable beach precinct typology that can be used to select and examine the Gold Coast beach precincts.

Selecting case study beach precincts for the Thesis.

Typographic Analysis: Analysis of the Selected Beach Precincts Using the Urban Beach Typology

Chapter Three: Politics of Place, in the Design of the Cultural Landscape

Reviewing the literature on cultural landscapes and meaning of place

Reviewing the literature of urban design values, guidelines and survey methods.

Selecting urban design principles for the analysis of the beach precincts that align with the cultural and restorative meanings of place.

Describing the attributes and characteristics of a walkable precinct.

Chapter Four: Describing the Urban Design of the Selected Beach Precincts

Surveying the typological attributes and characteristics of the Gold Coast beach precincts

Analysing the urban design attributes and characteristics of the precincts.

Comparison of the attributes and characteristics of the precincts and the places within them.

Urban Design Analysis

Analysis of the Selected Beach Precincts Using Selected Urban Design Principles from a Walk-through Perspective that incorporates Human Perception of Place and the Restorative Nature of Seaside Place

Chapter Five: Use of Beach Precincts by Individuals and Groups

Reviewing the literature on people's purposive use of place and the values associated with the meanings of place.

Describing the cultural processes of conflict that are related to the urban design of place and their purposive use by individuals and groups.

Observing the purposive use of place for social and recreational activities

Enquiring into people's preferences and expectations of beach precincts

Field Observations

Movement Activity
People Using Spaces and Places
Social Patterns of Use

Questionnaire

Purpose of Visit and Preference for Activity, Social Use, Amenity and Development.

Chapter Six: Public and Professional Opinions of the Urban Design and use of Place

Conducting a review of the informal literature to uncover the protagonists and processes of the dimensions of conflict over public access and use of the beach precincts

Designing a Delphi process to review professional opinions and preferences of the design and governance of beach precincts

Comparing the public and professional opinions and preferences for beach precincts

Textual analysis of Informal Literature

Oceanway and Public Access Articles
Themes and Topics of Conflict
The Postions of the Protagonists

Delphi Group Process

Enquiry into the Opinions and Preferences of Professionals for the Design, Development Planning and Governance of Beach Precincts.

Chapter Seven: People and the Purposive use of Place: Conclusions

Reviewing the main findings of the research

Describing the preferred design of beach precincts

Proposing options to improve the design of the beach precincts

Presenting general urban design guidelines for beach precinct design

Suggestions for a planning framework to guide the design and governance of places

Directions for future research suggested by the research

Figure 1.9.1 Organisation of the Thesis by Chapters (Author 2012)

In Chapter Four the selected urban design principles will be refined and modified to incorporate people's perception of social space at a human scale that is attentive to the nature of a walkable place in a restorative environment attuned to activity associated with the amenities and facilities of a beach precinct (section 4.0). Survey methods that are appropriate

to examining the cultural practices and activities associated with particular locations in a purposive and non-intrusive way will be determined (section 4.1).

Using the locations determined by the typology of urban beach precincts developed for the study, a walk through urban design analysis and survey of the precincts will be formulated. This typological and urban design analysis will utilise the selected design principles to analyse each the case study areas. In each of the beach precincts, data will be collected on the spatial arrangement and allocation of amenities and facilities in relation to the restorative nature of the environment for the preferred activity of walking (sections 4.2/4.3/4.4). The chapter will conclude with a discussion of the data collected in the typological and urban design walk-through analysis and survey.

Chapter Five will review the literature concerning the relationship and values that people have with the environment in order to describe the different individuals' and groups' activity and use associated with amenities and facilities of similar places to each of the different beach precincts (section 5.0).

A methodology will be developed for the observation of the different types of movement and activity using the same locations employed in the typological and urban design analysis so that the types of behaviours associated with similar places can be examined (section 5.1). The methodology adopted will be used in field observations to collect data on the social, age and gender patterns of use of the different locations in the case study areas (section 5.2).

The data collected in the field observations will then be analysed to explore the patterns and relationships of activity, amenity and facility associated with the different types of spaces and places in each of the beach precincts (section 5.3). The literature that describes people's preferences and visitation intent will be reviewed in order to develop a questionnaire intended for an intercept and visual preference survey of the purposes and values different groups have for use and activity in beach precincts (section 5.4).

The surveys will be analysed to reveal the preferences and values that people express for beach precincts. These will be compared to the patterns of use and activity found in the field observations. The chapter will conclude with an analysis of relationships and connections between the natural and built elements of the different types of places in the beach precinct with the observable and stated preferences for activity and use of beach precincts by different types of individuals and groups (section 5.5).

Chapter Six will continue and conclude the inquiry into public preferences and values for amenity, facility, activity and appropriate types of development in beach precincts. This will take the form of a systematic coding of the informal literature for content analysis of the opinions, values and beliefs of the public towards the conflict surrounding preferences for use, activity, amenity and facility of the beach precincts. This will be organised into an analysis of the local ‘Oceanway’ conflict and the nature of public access to the beach from precincts around the world (section 6.1).

The chapter will then turn to examine the opinions, beliefs and values of an invited group of professionals to represent the urban design, planning, building, governance and use of beach precincts. This research will take the form of a Delphi Group process. The Delphi Group members will be asked questions that emerge from the preceding stages of the case study (section 6.2). The responses of the Delphi Group members will then be coded and organised around the selected urban design principles of the case study and the important themes that arise from the content analysis (sections 6.2/3/4).

The chapter will conclude with an analysis and comparison of the common, shared and unique public and professional opinions, beliefs and values surrounding the themes and topics that relate to the urban design of beach precincts (section 6.5).

Chapter Seven will conclude the research with a review of the holistic and layered responses of the case study to the question of how well the urban design of the different beach precincts meets the expectations and preferences of the different user and interest groups. This review will use the findings of the analyses, observations and inquiries of the case study to examine the patterns and relationships between the urban design attributes, characteristics and values of the different beach precincts and the uses of and activities in different places within them (section 7.1).

The chapter will then discuss the different strands of the research to present an understanding of the physical elements and meanings of place that people associate with behaviours in beach precincts to meet their functional needs. It will also discuss how the political allocation and arrangement of land to particular uses and activities is different for social, privileged, aged and gendered groups of people, as well as the cultural significance of the political decisions observable in the different case study areas. It will also make normative suggestions for the urban design and planning of beach precincts that arise from the findings of the case

study (section 7.2). The thesis will close with suggestions for future research and a model for the way in which this research could be conducted based on the holistic findings of the thesis.

This thesis structure sees the first three chapters determining the research methodology, location of the case study areas and a definition of the tools of analysis to be used in the study. The next three chapters are concerned with collecting relevant data to answer the research questions. The final chapter draws the evidence together to present that data to provide descriptions, proposals and suggestions to address the purpose of the research questions in light of the evidence collected.

We now continue to chapter two to identify a suitable typology which can be used to describe, select and analyse the beach precincts of the case study.

Chapter Two Typology of Urban Beach Precincts

Place and sense of place do not lend themselves to scientific analysis for they are inextricably bound up with the hopes, frustrations and confusions of life. Edward Relph (1976).

This chapter reviews the literature for an understanding of the body of knowledge about urban place typologies that suits the purposes and intent of the research. The urban beach typology that is produced from this review will be used to select three different beach precincts that are representative of the different types found on the Gold Coast.

This typology of urban beach precincts will be based on the existing spatial arrangement of the built, recreational and natural environments and the land use orientation of public and private spaces of the urban beach precincts found on the Gold Coast. The construction, adaptation or adoption of a suitable typology is intended to answer the research question ‘What are the spatial and physical relationships in the different types of beach precincts on the Gold Coast’?

The urban beach typology will be used to guide an urban design analysis of the different beach precincts in terms of selected urban design principles to produce comparisons of the selected beach precincts and determine how well the different configurations of public and private space meet the preferences of the users and stakeholder groups of the beach precincts. It will also allow the researcher to use the physical and spatial elements of the beach precinct typologies to locate the field observations in similar places in each precinct studied.

With over 52 km of ocean beachfront (Gold Coast City Council 2012a) it was difficult to select representative places to locate the intended study (Figure 2.0). There is a degree of sameness in many of the beachfront suburbs with little local identity or sense of place - a ‘geography of nowhere’ (Kunstler 1994). There are also a few places with a strong recognisable identity, such as Burleigh. This made the task of identifying an urban taxonomy of space for the Gold Coast beach precincts difficult, as many places could be assigned to different types of taxonomies, as discussed later in the chapter.

An initial survey of the beach precincts was conducted using a visual scan of the entire Gold Coast beach frontage utilising Google Earth™ that was combined with field visits to places along the coast identified during the scan. This initial survey revealed a consistent linear spatial relationship of development adjacent to the beach. This spatial arrangement of development, where the street structure and public spaces are aligned in similar ways, led to

the consideration of a typology of beach precincts that may be generalizable to beachfront development on the Gold Coast and other coastal cities or towns.



Figure 2.0 View over Mermaid Beach (GCCC Local Studies Library, Photographer Daryl Jones 2003)

During field visits it was also observed that the beach front development has a degree of uniformity in its activities that appears to relate to the spatial arrangement, orientation and design of particular places along the beach. Some places saw people gathering, stopping and socialising, whereas other stretches of beachfront were mostly places used for travelling along the beachfront or the inland road.

There is also an observed regularity of development in three general types of spatial arrangement. There are Esplanade's with homes, apartments and resorts on the landward side of a coastal road and varying configurations of pathways, grass verges, managed beach access points and some public facilities on the seaward side of the road. In a few of the mostly older places along the coast there are linear foreshore parks with amenities and facilities to support beach and foreshore park activities. For over a half of the coast there are private properties built along the foreshore and only limited amenities and facilities to support activity on the beach for visitors (Wake *et al.* 2008). This initial scan suggested that a typology may be constructed based on the built form, land uses, movement and recreational spaces of the beach precinct in its spatial arrangement and orientation to the beachfront.

2.1 Attributes, Characteristics and Values of Urban Beach Typologies

This research constantly refers to the attributes, characteristics and values of a place.

Attribute and characteristic appear to be two words that are relatively interchangeable when examined for their definition. Characteristic or character are among the most used terms in the urban design literature to describe places, but for the purposes of this thesis the terms attribute, characteristic and value have been assigned specific meanings, adopted for the analysis of the beach precincts:

Attribute: The specific thing or artefact found in a place that can be used to construct a typology of beach precincts or contribute meaning to the urban design principles adopted for this thesis. The typology is constructed using similar physical, cultural and natural artefacts such as roads, pathways, residences, apartments, resorts, shops, cafés, SLSC buildings, showers, viewing platforms and foreshore-parks, to sort different beach precincts into types. Some of these attributes are common to all types of urban development, others, such as foreshore-parks, are only found in beach, river or lake precincts.

Characteristic: The typical properties of an attribute that differentiate or distinguish one beach precinct from another. For example, the attribute of a foreshore park can be described by its design, size, spatial arrangement, and provision of facilities like toilets or by the possession of a particular designation for activity or use such as children's playground or event space. These characteristics differentiate the foreshore parks in different beach precincts.

Value: The worth or importance attached to the attributes and characteristics of the spaces and places, natural, transitional and built environments of the beach precinct. The degree of importance is expressed as the value that an author, commentator, observer or correspondent, associates or attaches to the attributes or characteristics of the beach precinct. The associated or attached degree of importance of the different attributes and characteristics of the beach precinct may be personally, socially or culturally associated with their history of use or degree of fit for their preferred purpose of visit.

The spatial relationship that a coastal city has with the natural environment is unique to coastal cities. The traditional radial city has precincts that cluster in its highly developed core. The radial city precincts have access to all the economic, social and cultural benefits of a

particular type of city form aligned to the high value cultural and economic activities typically found in its centre (Figure 2.1).

The linear coastal city, by contrast, strings its highest value land and precincts along the coast to access the economic, environmental, social, cultural, health, lifestyle and recreational benefits of the beach. The coastal city may have a city centre along the beach or inland or both. In the radial city, nature is generally found on its periphery or in parklands and any rivers passing through it. The linear coastal city has a relationship with nature on both sides of its urban form as well as in its parklands, rivers and wetlands.

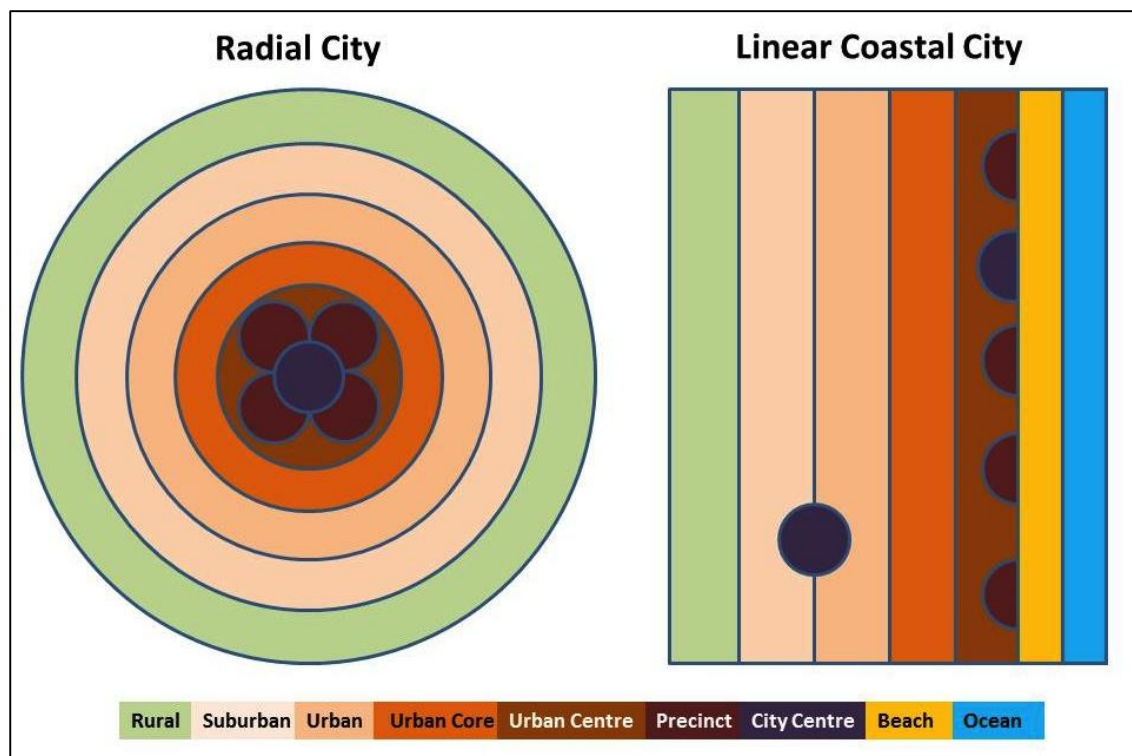


Figure: 2.1: The Built Environment Relationship to Nature in the Radial and Linear Coastal City (Author 2012)

The attributes and characteristics of a typology that would appear to be most relevant for a beach precinct are those that relate to the activities that take place in the precinct. These activities may be tourism, beach use, leisure and lifestyle and the arrangement of public space, amenity and facility to support those activities. The reason that people can stay in a place to enjoy those activities will be enabled by the surrounding private and commercial buildings and the way on which the precinct connects to places to facilitate visitation or residence in the precinct.

Urban places can be typified by many different values including cultural and social landscapes, urban morphology, geography, climate, local character, spatial and physical

arrangements, land uses and activities. The research is interested in determining a typology for analysis that will help to identify the recognisable types of Gold Coast beach precinct that permit or deny public activity and access to the principal recreational spaces of the precinct – the beach and foreshore.

There is a considerable literature from the planning and tourism fields that was not considered suitable to establish a typology for this case study as they did not focus on the urban design and spatial/morphology aspects of beach precincts. For example, resort life cycle models that examine how resorts, grow and develop (Butler 1980), typologies of tourism precincts (Howard 2010) and the development of waterfronts in established river and port cities that are often associated with recreational use and regeneration projects (Mann 1988; Marshall 2001; Stevens and Ambler 2010; Schubert *et al.* 2010; Sepe 2013).

In order to determine a typology that is robust enough to be used for urban beach precincts in and beyond the Gold Coast, the literature of urban typologies was reviewed to reveal how urban typologies are formed through their classification of spaces, places, natural and built environments and their uses and activities. In particular, existing urban typologies were examined that were concerned with seaside activities, transitional spaces from built to natural environments, patterns of coastal development and the typification of urban places by their land uses.

2.1.1 Tourism, Urban, Beach and Transitional Typologies of Place

Places can be assigned type descriptions based on any number of functional, architectural, climatic, social, cultural, or environmental attributes. An example of this is found in the analysis by Hayllar, Griffin and Edwards (2008). They identified and proposed tourist taxonomy of precincts based on the type of tourist attractions different places possessed:

- recreational or tourism business districts
- tourist shopping villages
- ethnic precincts or quarters
- entertainment precincts
- red light districts or bohemian quarters
- waterfront precincts, and
- festival precincts.

The particular place properties assigned by Hayllar, Griffin and Edwards (2008), are oriented towards land use and activity attributes and characteristics that can be considered to be subject to cultural shifts, dependent on political approval and funding, potentially transient and subject to the influences of various political and aesthetic fashions.

Some of the precincts on the Gold Coast, such as Broadbeach and Surfers Paradise, could be described as entertainment or festival precincts, but the fundamental attributes and characteristics of those places arise from their spatial and physical relationship with the beach. Using a similar approach to place classification as Hayllar, Griffin and Edwards (2008) would also mean that many places along the Gold Coast coastline would not be easy to classify, particularly the residential precincts with little or no tourist visitation. However, the importance of tourism to the design of Gold Coast beach precincts should be accounted for in any typology of the precincts.

A review of beach management principles and practices by Williams and Micallef (2009) examined a number of beach and adjacent development typologies. They report typologies of beaches that are based on the beach systems, material composition, artificiality and physical characteristics:

1. Beach systems can be classified by four elements that create beach states: wave height, wave period, sediment size and spring tide range. Each beach state can also be classified into three beach types: wave dominated tide-modified and tide dominated. All these beach states can be modified by other characteristics such as offshore reefs, rock flats, high energy sea environments, or extreme climatic conditions.
2. A typology of beaches classified by beach material composition ranging from mud sand, gravels, cobbles and mixtures; and where they are in a wave climatology spectrum from dissipative to reflective (high energy to low energy).
3. A typology based on whether the beaches are natural or artificial. The Gold Coast urban beaches are considered artificial as they are dependent on extensive engineering devices, dredging and replenishment of beach sand programs.
4. The physical shape of the beach may be pocket or lineal: pocket beaches are small beach enclaves enclosed by headlands, with onshore-offshore longshore move of sediment movement with a debatable size. This could mean that Burleigh Beach and Currumbin Beach would be examples of pocket beaches on the Gold Coast. Linear

beaches are long straight beaches with a pronounced longshore drift, which would be a definition of most of the other Gold Coast beaches (Williams and Micallef 2009).

Williams and Micallef (2009) also report beaches classified into typologies according to anthropogenic characteristics based on adjacent land development status. These are remote, resort, rural, village or urban beaches with resorts occurring in any of the previous four types, as is the case in the urban development on the Gold Coast. They also found typologies based on the level of use or activity as heavy, medium and dense, as applied in Barbados (Coastal and Environmental Engineering Solutions 2006).

Other tourism and beach typologies found in the review used attributes and characteristics of beaches and their adjoining development to construct typologies that can broadly be described as contextual, for the purposes of this thesis. Although there is no intent to critique typologies of beaches and offshore coastal environments, the type of beach that is adjacent to the urban development of the beach precinct will affect how that development is arranged and oriented to the particular benefits of that beach.

Coves and bays are very different types of places from the ocean beaches and headlands of the Gold Coast and permit different types of activity. It is noticeable that the Gold Coast promotion of, and association with, surfing is aligned to the nature of its ocean beaches, whereas boating and fishing will be more common activities in beach precincts with small harbours in a protected bay.

Ocean beaches may be suitable for people who have the training, skills and physical ability to engage in surf sports. However, they carry a degree of risk for tourists unused to surf conditions and unfamiliar with the dangers of this type of beach (Williamson 2009). There are ways of classifying beaches that include their safety rating for swimmers. This is thought to be a very significant consideration for Gold Coast beach precinct users. The Australian ocean beaches are an unfamiliar environment for many people, including tourists, and the number of drowning events on the Gold Coast beaches has a human, social, cultural and economic impact on the reputation of the city.

Surf Life Saving Australia has developed a hazard rating system for physical beach and surf conditions for 11,917 beaches in six states and territories of Australia (Williamson 2009). This is available from their website and they have also developed an iPhone application with beach ratings and other information about the hazards at the beach. The information on the

website is available in 34 languages and the general numerical rating given for the beaches as: Least hazardous 1-3 to Most hazardous 9-10.

The website also provides information on the facilities available at the beach, information on hazards specific to a beach, such as the likely location of rips, and information on the beach topography, swimming, surfing, fishing and accessibility that is useful to the users of the beach precinct (Surf Life Saving Australia 2009). Broadbeach, Mermaid Beach and Burleigh Heads Beach all have a moderately hazardous rating of 4 to 6, which also covers all the rated beaches on the Gold Coast (Surf Life Saving Australia 2009).

Typologies have also been based on the beaches spatial relationship to local governance structure. In Catalonia beaches are defined as ‘urban’, ‘urbanised’ or ‘natural’. ‘Urban’ beaches are located within the nucleus of municipality with a hinterland of high density. ‘Urbanised’ beaches are found in residential areas outside of the main municipalities with less than 50 per cent of an urbanised hinterland of low density. ‘Natural’ beaches are located close to very low urbanised areas with less than 30 per cent of the hinterland being urbanised (Ariza, Jimenez and Sarda 2008).

In the U.K. the Heritage Coast program within the coastal management framework classifies beaches from ‘honeypots’ with scenic landscapes, high tourist visitation and recreational activity to ‘remote’ beaches with few visitors and few activities. The program aims to conserve scenic quality, conserve/protect/enhance the coastal environment, improve community involvement and identify undeveloped coasts (Williams, Sellers and Phillips 2007).

The commonalities of the Catalanian, Barbadian and British typologies concern the relationship between the specific type of beach, its adjacent land use, and activities conducted on the beach and in the adjacent development. The variation in the typologies appears to arise from the particular focus of the governing bodies responsible for the development and management strategies of the beach precincts.

2.1.2 Coastal Development Typologies of Place

A typological model of development that considers coastal development along beachfronts was proposed by Smith (1990). This model was based on four cases from Asia and Australia that included Surfers Paradise. It was produced in response to pre-existent models that did not specifically address beach resorts, or which were of an earlier era, and in Smith’s opinion,

dated. The intent of Smith's model was to understand beachfront development evolution and the likely sequence of urbanisation (Figure 2.1.2).

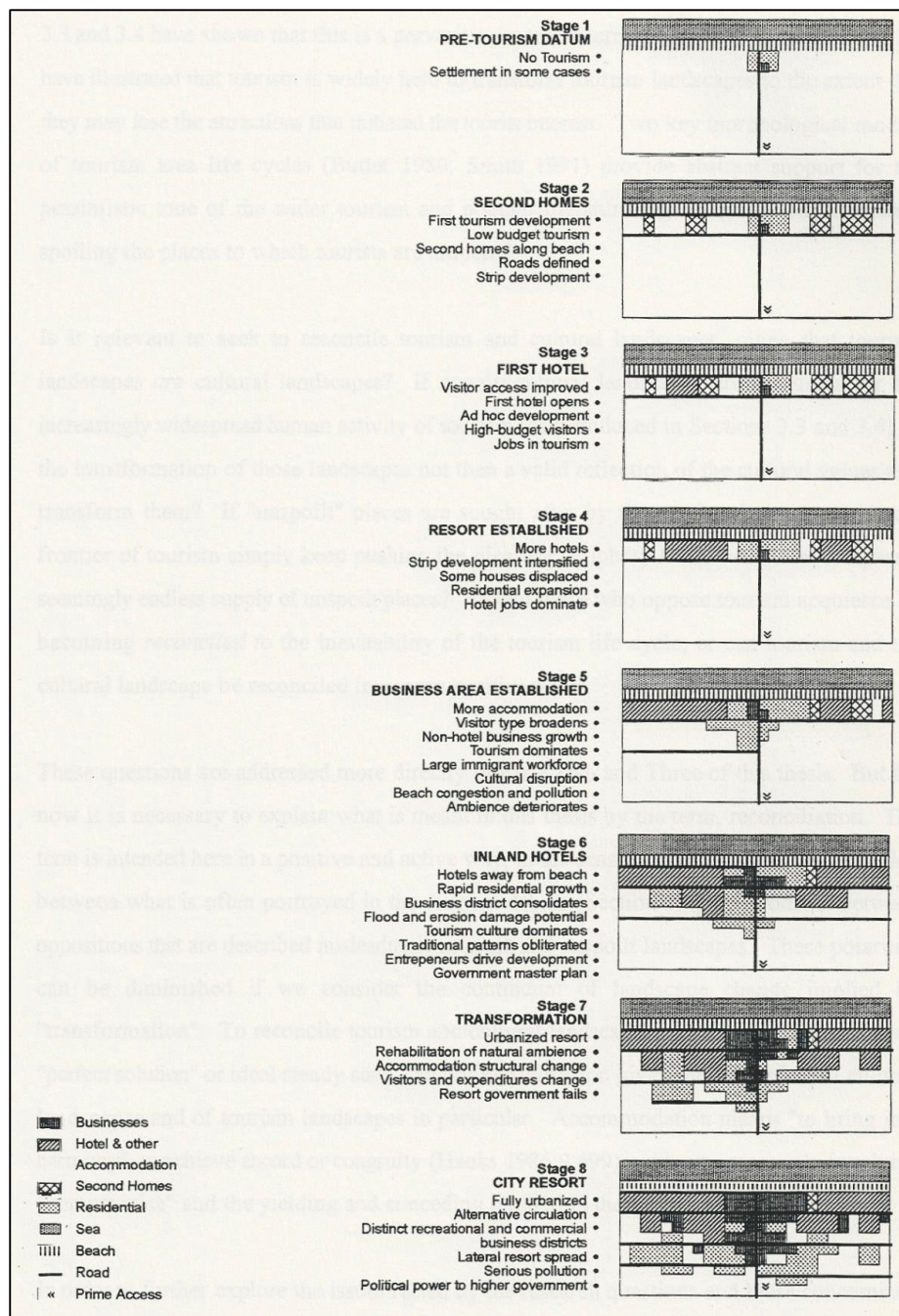


Figure: 2.1.2: Smith's Beach Resort Model of Development Evolution (Smith 1990)

Smith's (1990) model aligns development in parallel bands to the beachfront, starting with a residential node at the end of a road to the beach that Smith termed 'prime access'. Building then goes through a sequence of stages of development where businesses, second homes, resorts, hotels and roads spread in bands of different economic value and land uses associated with their degree of adjacency to the beachfront.

The model helps to illustrate the links between stages of development and social conflict. For instance, people who settle in an early development stage of second homes may appreciate the improved amenity and facility of more intensive forms of urbanisation until a business area develops and an influx of outsiders arrives. They then find the precinct to be overcrowded compared to when they first moved in. These types of social conflict can be found in the ‘not in my backyard’ (NIMBY), insider and outsider narratives discerned in the informal literature of article comments in local newspapers.

Smith’s Beach Resort Model of Development Evolution is useful in explaining the observed relationship between conflict and stages of development. The model presumes that beachfront development commences with foreshore development and does not include a public beachfront reserve option. This makes it an analysis of the American model of beachfront development, as it does not cover the public foreshore park or esplanade British beachfront development found in the Gold Coast. However, Smith’s model remains of historical interest to the research.

2.1.3 Coastal Transitional Space Typologies

The transitional space between the natural and built environment is an essential component of any typology of urban beach precincts. It is this transitional space that determines the types of activity and level of public access to the benefits of the natural environment for residents, tourists and visitors. The post-war boom in coastal development saw developers build houses, restaurants, hotels and other structures along coastlines. This created a strong local reaction to the loss of amenity and public access to those beachfronts that only a short time before had been coastal fishing villages (Bramwell 2004).

The Ley de Costas Typology of Coastal Development

Largely in response to loss of public access and the privatisation of long stretches of the Spanish Mediterranean coast, the Spanish government introduced the Ley de Costas or Shores Act in 1988, as part of a series of measures intended to regulate development on the seafront. The Act sets out to make the whole of the Spanish coastline a public domain, to reassert public ownership and control development along the coast. It is also intended to defend the coast against erosion and excessive urbanisation (Ministry of Agriculture, Food and the Environment 1988).

There is an implied typology in The Ley de Costas legislation of land use for beach precincts. The law defines a series of zones lateral to the beachfront and extending inland from the shore. Walking along the beach frontage without having to walk on the beach is explicit in the public zone as a promenading space. The different zones also indicate appropriate activity and land use within the zones (Figure 2.1.3a).

1. **Public Zone.** This area comprises the tidal zone of the beach, the beach itself and, if present, the dunes behind it. It continues from the line of maximum landward influence of the sea, known as the demarcation line. From this line there is a public pedestrian promenade 6 metres wide that can be extended to 20 metres. This area belongs to the state and, other than in very limited cases, it cannot be owned privately.
2. **Restricted Development Zone.** This is a zone from the line of demarcation that is 100 to 200 metres wide in urban areas and up to 500 metres wide in non-urban areas. Development is restricted in this zone and local administrations have to manage it to include services (for example parking areas close to popular beaches) and to limit the height of buildings and other architectural characteristics.

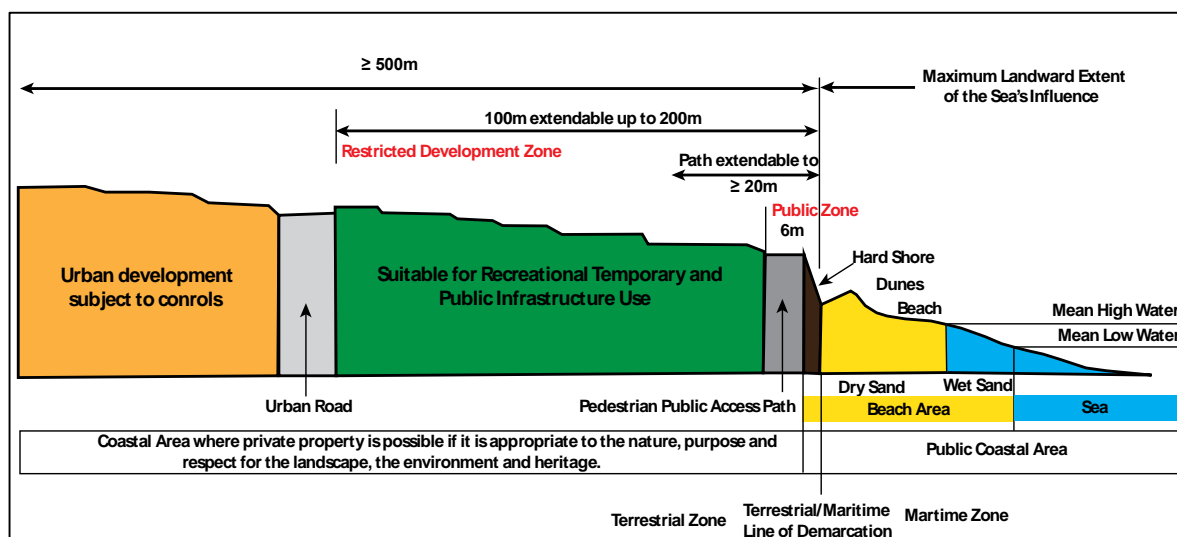


Figure 2.1.3a: The Designated Zones of the Ley de Costas (Author 2013)

The parallel form of development in beach precincts and its spatial orientation to the beachfront is implicitly recognised by the legislation as important for public access to the beach. A significant aspect of the legislation is that it is oriented to re-establish public access to the beach and foreshore through the ancient rights of the kingdom to the defence of the realm. This echoes legislation originating in the same claims to sovereignty of the coastline

by the English crown that created land ownership rules for the border of the realm. These regulations have been passed down to the ex-British colonies such Australia (Corkill 2013).

The Ley de Costas legislation defines the public coastal area up to the hard shore and the restricted public development zone as suitable for the public uses of recreation, temporary and public infrastructure. In doing so it creates a transitional zone that will be free of intensive development, oriented to activity and controlled by the government. This transitional space, in turn, can be managed to respond to climate change, flood and erosion. In maintaining a buffer zone between nature and the built environment, the legislation is able to limit the level of public liability and potential costs of those threats.

The zones and lines of demarcation defined by the law also created a public zone of ownership where there was a great deal of existing development. All those developments were then considered to be infringing public property. If this is the case, the government is entitled to confiscate any development without reparation. The confiscated property then reverts back into the public domain. Some property owners were granted a thirty year period to enjoy the construction (Ortega 2013).

The Ley de Costas legislation intends to control development, transit and public access to the beach. It is designed to regulate the plans and policies of regional and town planning and ensure sufficient public access to the sea and parking outside of the designated public domain. Unfortunately, the act is said to be largely ineffective and it has been challenged by alliances of property owners since its inception (Ortega 2013).

The Spanish legislation is interesting in that it is an assertion of the primacy of the right of the public to access the beach and foreshore over economic and personal development of this transitional space by private interests. The legislation also indicates lateral zones of activity that are thought to be an appropriate use of space, such as promenading along the foreshore through a designated public zone that must be at least 20 metres wide. The legislations also recognise the importance of the relationship between people, the beach coastal area and pedestrian access along the foreshore.

It is thought that the Ley de Costas has elements that can directly inform the analysis of Gold Coast beach precincts. It may form a foundation for a typology of those precincts based on spatial alignment of development to the coastline, public access provision to the beach, land

use regulation and the arrangement of public and private infrastructure that is appropriate to place and respects the natural environment and common heritage values of the coast.

Bluespace Typology of a Port City

A more recent typological matrix developed by Diane Brand (2007) proposes a ‘Bluespace’ typology of the transition of urban and natural space that exists in a port city like Auckland. The intent of the typological matrix was to build an understanding of how the interface between the land and the sea combines to produce different types of public spaces in port cities (figure 2.1.3b).

Brand termed the transitional space from the sea inland as ‘Bluespace’ with the following definition: ‘A physical space or social activity, which has an edge condition or adjacency that is coastal and the context is urban in character’ (Brand 2007). This definition is of interest to this research as it implies that a particular type of space has attributes that can be described by the nature of its location, adjacency and edges, along with the use of that defined space in a social and urban context.

MARITIME ANALOGY	SEA/LAND RELATIONSHIP	FORMAL / SPATIAL CONFIGURATION	URBAN SPACE TYPE
MARITIME HIGHWAYS Baltic Sea Mediterranean Sea Hauraki Gulf	SPACE + ACTIVITY ON WATER	SPACE CONTAINED BY LAND	INFRASTRUCTURE
FLEETS AT ANCHOR Sydney Cove C18 San Francisco C19 Aberdeen Harbour Hong Kong	SPACE + ACTIVITY ON WATER	SPACE CONTAINED BY LAND	QUARTER
HARBOUR ARENAS Rio de Janeiro Harbour C19 Hauraki Gulf Americas Cup [00, 03] Valencia Americas Cup [07]	SPACE + ACTIVITY ON WATER	SPACE CONTAINED BY LAND	ARENA
BEACHES Bondi Beach Sydney Copacabana Rio de Janeiro The Palms Dubai	SPACE + ACTIVITY ON LAND AND WATER	SPACE CONTAINED BY LAND	PARK
PIERS AND JETTIES Queens Wharf Auckland C19 Walsh Bay Sydney C19 Hanuabada Port Moresby	SPACE + ACTIVITY ON LAND AND WATER	LINEAR SPACE OVER WATER	STREET
CONTAINERS Borneo Amsterdam Ruoholahti Helsinki Amphibious houses Middelburg	SPACE + ACTIVITY ON LAND AND WATER	MUTIPLE UNITS GEOMETRICALLY CONFIGURED IN 3D SP	BLOCK
DOCKS/CANALS Grand Canal Docks Dublin Koop Van Zuid Rotterdam Puerto Madero Buenos Aires	SPACE + ACTIVITY ON LAND	BUILDINGS SURROUNDING FOCUSED WATER SPACE	SQUARE
WATERFRONT SQUARES Piazza San Marco Venice Praca do Comercio Lisbon C18 Largo do Paço Rio de Janeiro C18	SPACE + ACTIVITY ON LAND	OPEN SPACE ENCLOSED ON 2 SIDES BY BUILDINGS	SQUARE
BEACHED VESSELS Niantic San Francisco C19 Ark Wellington C19 Alang Gujarat	SPACE + ACTIVITY ON LAND	SHIPS ON LAND	BLOCK BUILDING

Figure 2.1.3b: Bluespace Matrix (Brand 2007)

Brand's analysis of port places in Auckland identified an urban typology of nine space types that were included in a typological matrix. The elements of the 'Bluespace' typology are seen as belonging to the genre of architectural and urban classification of public space promoted by Krier (1979). The 'Bluespace typology' is presented in terms of the clarification of public space into persistent primary and transient secondary elements that result as part of the design process of public space.

The architectural and urban design primacy of the proposed typology can be seen to be transient, political and subject to artistic influences based on the prevailing dominant political class's preferences and cultural constructs and part of the professional practice of architects and their relationship with clients (Frampton 2007).

The value of Brand's (2007) analysis lies in the recognition of the construction of public spaces aligned with the social use of the transitional coastal urban space, and the effect changing technologies can have on the spatial layout and orientation of those spaces. Brand's analysis relies on definitions of characteristics that would be difficult to apply to the analysis of Gold Coast beach precincts as they were formed in the context of an analysis of the port functions of Auckland, New Zealand.

This thesis intends to examine the spaces and places of the beach precincts beyond the customary practices of architecture, urban design or planning, and seeks to view space and place from the perspective of the user who walks through the space and constructs their understanding of the edges and transitions from what they can perceive, not what is known to professional insiders. As it is one of the intentions of this thesis to construct a typology that allows the analysis of particular cases of transitional coastal urban spaces to be generalisable, this would appear to marginalise the utility of the 'Bluespace' typology for this thesis.

2.1.4 Urban Typologies of Place

The final group of typologies of place that were examined in order to inform the construction of an urban beach precinct typology are concerned with the built form of private and commercial buildings and how they support activity in the precinct. How the urban form and public space network connects the precincts to places within and beyond the precinct will also be considered. These typologies have been produced within the fields of architecture, urban design and planning and are often interrelated to the political perspective and origin of the authors.

Typology of Urban Space

A distinctly architectural view of the typology of urban space is proposed by Rob Krier in 'Urban Space' (1979). This is a typological and morphological text on urban structure which is often referenced by other authors in the field. Krier only saw two elements of urban structure: the street and the square, which he equated with the corridor and room of a building. These two elements are regarded as evolving in response to function over the period of human settlement. The first element of the typology is the square, produced by grouping houses around an open space. The square evolves over time as it accumulates symbolic value as gathering spaces that in different places and in different cultures became the agora, forum and cloister (Krier 1988).

The second element in Krier's typology is the street. The evolution of the street is presumed to arise when the space around the square was exhausted and it became a way of distributing the land. The distinguishing characteristic of the street is its access to individual plots that are of a more pronounced functional nature than the square. This is a rather mechanistic explanation and does not explain the common spatial arrangements of settlement patterns oriented to resource, activity and amenity (Mumford 1961).

Where Krier does produce a coherent argument for a typology is in the cataloguing of the different types of spatial arrangements and sizes of combinations of squares and streets. Krier's architectural typology can also be termed as a pattern book or reference catalogue of architectural types. Catalogues of styles are commonly seen in architecture (Alexander *et al.* 1977; Guthrie and Guthrie 2003), transport planning (Marshall 2005), new urbanist development (Urban Design Associates 2005), planning (McIndoe and Popova 1999) and other applied arts fields such as jewellery, ceramics, interior design and fashion.

Krier's typology is useful as a reference of the types of architectural interfaces between public and private spaces that exist in classical Italian cities and towns. The typology can also inform how these interfaces and intersections create the backdrop for the spatial arrangement of the public space networks which were produced to serve political, religious and cultural paradigms of classical and Renaissance Italy. It is of lesser value for the analysis of the postmodern urban spaces of globalised development that include natural and built environments used for recreational and lifestyle purposes, such as those found in a Gold Coast beach precinct.

The Rural-Urban Transect Code

The rural-urban transect code (Duany, 2002) was examined as it seeks to improve the design of buildings, neighbourhoods and regions by realigning public policy and development practices to create sustainable, walkable mixed use neighbourhoods. It also specifically addresses the relationship of people to the natural and built environment and the types of development that are suitable for different locations within a city.

The Congress for New Urbanism (CNU) was founded in reaction to the urban sprawl development of the previous decades (McIndoe and Popova 1999). The intent was to create neighbourhoods designed for all people regardless of race or income. Because they were compact, they would make less demand on agricultural land and wilderness than the widely adopted regional planning model that sought to protect nature from development, but is claimed to have contributed to urban sprawl (Congress for the New Urbanism 1996).

CNU formed nine task forces in 1994 to address the problem of reconciling urbanism with environmentalism. To do this they set out to create a nomenclature and lexicon of the natural transect as a taxonomy that generated a development sequence of 'naturally diverse rural' to 'socially diverse urban' (Duany 2002).

The task forces addressed the amalgam of environmentalism, modernist suburban zoning and regional planning practice they had identified as preventing the widespread adoption of New Urbanism. They proposed an alternative approach to planning based on an urban or natural ecology analysis of the relationship of the natural and built environment (Duany 2002).

To do this, the task force examined the theoretical basis for the practices of regional planning founded in habitats and ecologies of place. They deconstructed those theories to form a new approach to environmental protection. One of those pre-existing theories was the natural transect. Duany (2002) describes the transect as a natural law originating in the science of habitat that describes how ecosystems have a symbiotic relationship with the minerals, geomorphology and climate of a particular place that supports particular flora and fauna (figure 2.1.4a).

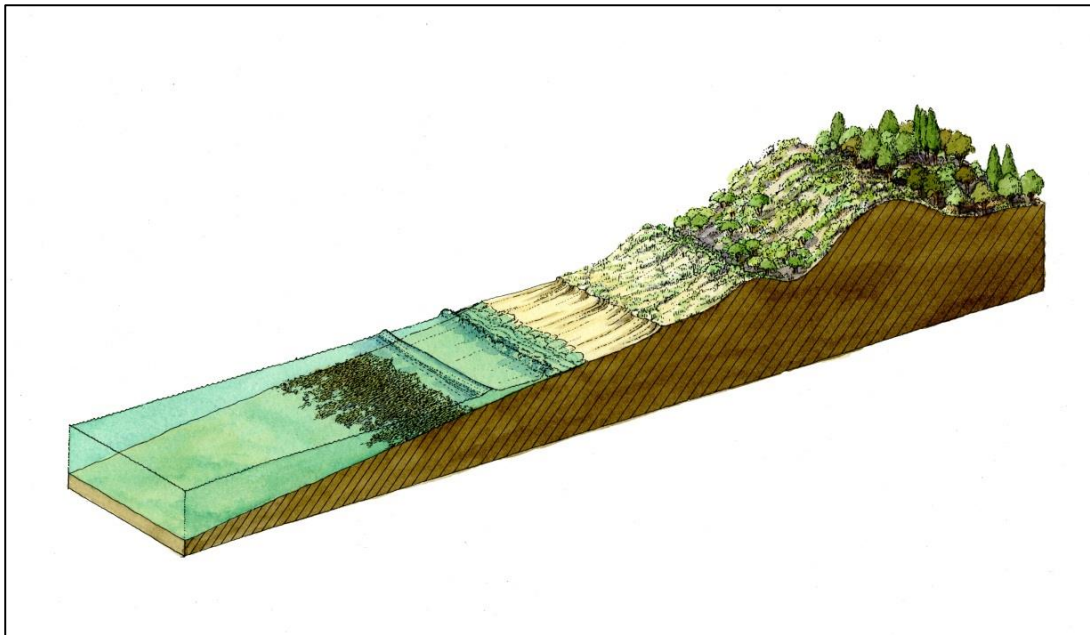


Figure 2.1.4a: Natural Transect of Environmental Habitats (Duany 2002)

Duany attributes the first application of the natural transect to Sir Patrick Geddes. The ‘valley section’ shows how nature determines and supports productive human activities, from miners in the highlands, shepherds in the foothills and gardeners and fishers along the river (figure 2.1.4b). As a nascent town planner, Geddes was amongst those who helped to create the theoretical foundation for regional planning (Geddes 1915).

Duany (2002) argues that thinking behind the ‘valley section’ produced unintentional but inevitable consequences when it was applied, as it was intended to sequentially remove ecologically sensitive land from potential development in regional planning schemes. This approach of setting aside ecosystems and preserving watersheds from urban development is still current in the South East Queensland Regional Plan (Queensland Government 2005).

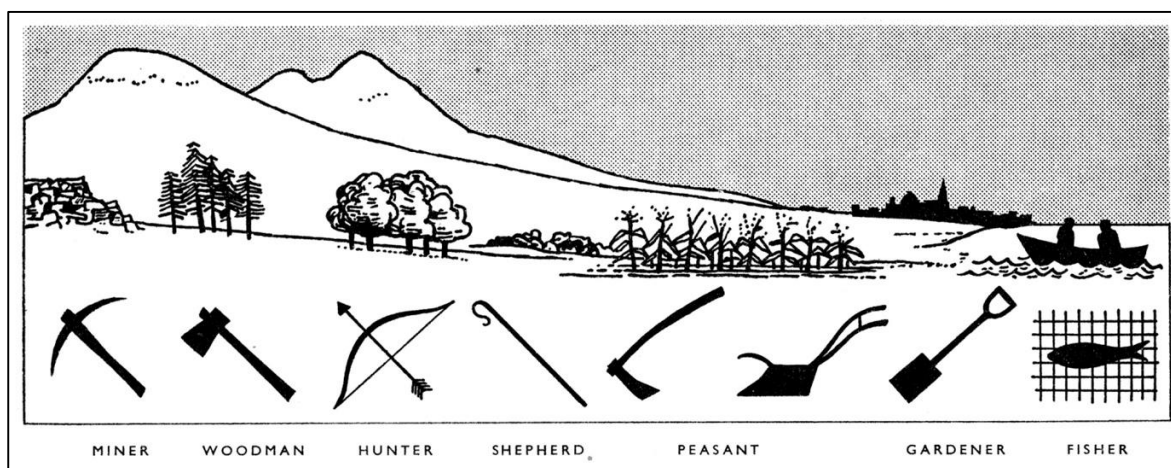


Figure 2.1.4b: Patrick Geddes – Valley Section, 1909. (Source: arc.esac-pau.fr)

Duany (2002) asserts that the regional planning approach is rooted in the position that ‘nature is sacred and the city is profane’. When it is applied through the practices and processes of regional planning it leads to the development of environmentally sensitive and aesthetic places that are otherwise identical to sprawl. Duany cites Hilton Head, South Carolina and Amelia Island, Florida in the United States as coastal examples of the application of this type of thinking.

When examined on Google Earth™, Hilton Head and Amelia Island have similar development patterns to those found on the Gold Coast, with the foreshore built out by individual homes and, further inland, a network of Golf Courses and waterways. The urban form of separate land uses interspersed by nature preserves would apply to most of the Gold Coast suburbs away from the urban coastal spine, although development practices in Australia also tends to assign ‘useless’ land for development as nature reserves (Low Choy and O'Hare 1955).

The Rural-Urban Transect proposed by Andres Duany (2002) is part of an effort to establish a theory of urban design that would act as a counter to the environmental protection oriented regional planning systems (Figure 2.1.4c). The Rural-Urban Transect taxonomy provides the basis for designating places as ‘natural’ and subject to environmental protection, and ‘urban’ and subject to a declension of built development suitable to their zoned character in the morphology of the urban areas.

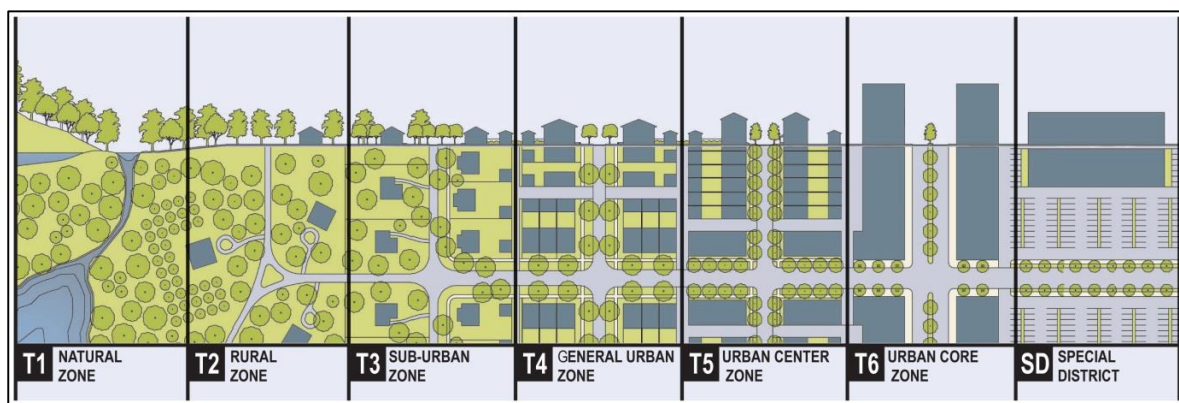


Figure 2.1.4c: The Rural-Urban Transect (Centre for Applied Transect Studies 2010)

In adopting this transect, the Congress for New Urbanism believed it would help to create places in the natural and urban zones that are sacred to their particular nature and function. The rural transect zones known as T1 and T2 could be either preserved, according to their natural functions, or available for future development. Sub-urban zone T3 is seen as a

transitional zone between rural and urban on the fringe of the settlement. Urban zones T4 to T6 are more or less urban and the special districts are meant to cover other places like waterfronts.

The concept of a Rural-Urban Transect as a taxonomy of development is of interest to this research, but not directly applicable to it. The taxonomy arises from a study of typical forms of American cities and the normalised concept of an urban core slowly becoming less densely developed and transiting toward a natural environment through rings of gradually less compact development. Although the Rural-Urban Transect may be applicable to radial cities, it fails to identify the case of beach precincts as the urban cores of a coastal city.

The Rural-Urban Transect does not describe the relationships of urban, natural and rural environments found in the coastal city. Coastal cities like the Gold Coast have developed as polycentric cities with bands of land use parallel to the coast extending inland until they merge with the natural and rural land uses of the Hinterland (Section 2.1).

In the beach precinct there is no transition of the natural through rural to urban zones described by the New-Urbanist transect codes in the beach precinct. Instead, there is a sharp physical adjacency of the natural and built environments with no transitional T1 rural or T2 sub-urban zones at all between urban built and natural environments.

The lesson to be drawn from the Rural-Urban Transect is that applying theory developed in other cultural contexts needs to be done with caution. The concept of the natural transect proposed by Geddes in 1909 (Thompson 2004), upon which the Rural-Urban Transect is based, is seen as a useful component of the intended urban beach typology. The transect, as a scientific tool of analysis, can be adapted to analyse a section of the beach precinct from the beach through the transitional form to the built environment in much the same way as it is used by New Urbanism to analyse the transitions of cities from rural to urban.

The attributes that are most useful to the creation of a Gold Coast urban beach typology are ones that examine the spatial arrangement of land use, public and private space relative to the beachfront and beach. This includes the transitional spaces, edges and forms that support movement and other activities by the location of amenities and facilities. The typologies analysed for this thesis all have useful aspects, but none was thought to completely match the intent of the research. We now move to the creation of a typology of Gold Coast beach precincts that draws on the analysis conducted in this section.

2.2 The Typology of the Gold Coast Beach Precincts

An urban beach precinct typology for the study was developed from the analysis of the attributes and characteristics of other urban typologies that were concerned with seaside activities, transitional spaces from the built to natural environments, patterns of coastal development and their land uses. The author has created a simple typology to be used in conjunction with an urban design analysis and field observations. It is intended that the simplicity of the spatial land use attributes of the typology can be elaborated by the characteristics that describe and differentiate each precinct (Figure 2.2).

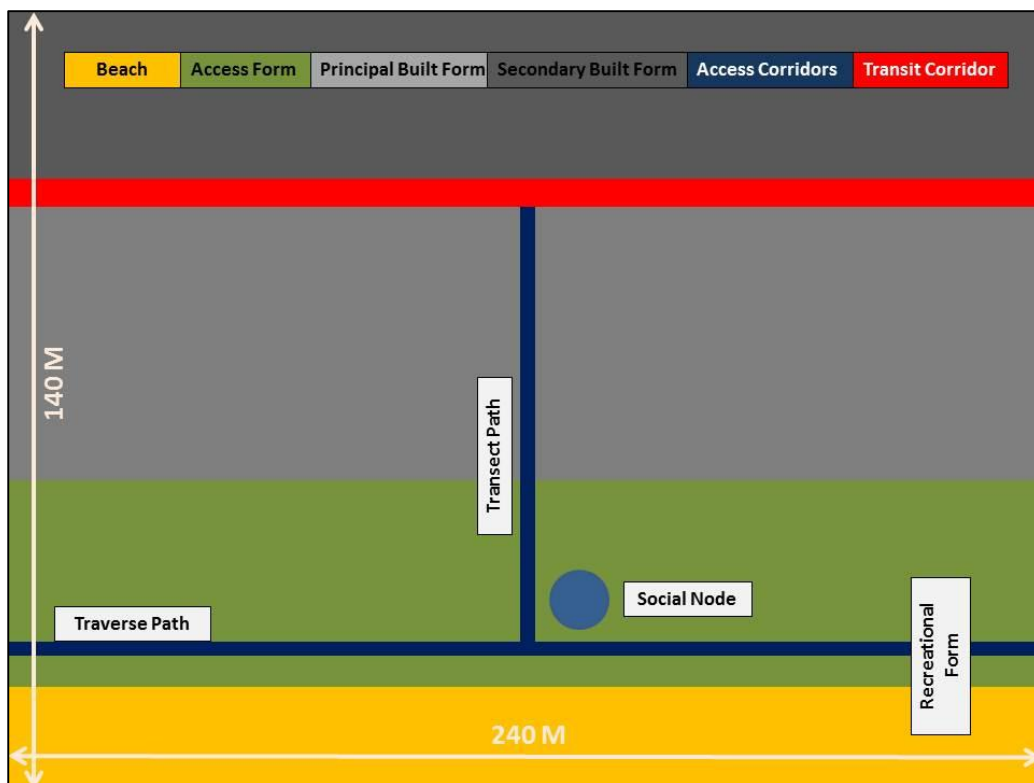


Figure 2.2: Typological Model of Gold Coast Urban Beach Precincts (Author 2011)

This typology draws from the definition of the public access to the coastal area, recreation and activity zones and adjacent development attributes of the Ley de Costas (1988), the concept of dominant land uses of adjacent built environment suggested by Hayllar, Griffin and Edwards (2008) and the transect tool of analysis for human and natural habitats as conceived by Duany (2002). The transect tool has been adapted as an analysis for the important pathways, intersections and edges of the forms of the beach precinct. The path/s from the beach inland are the transect path/s and the traverse path is along the beachfront or the nearest road parallel to the beach.

For the purposes of this study the beach precinct has been defined by the researcher as a space with dimensions of 140m inland from the beach and 250m along the beachfront with an approximate area of 3.5 hectares. These dimensions give a walkable space that can conservatively be traversed in any direction in approximately two minutes at the walking speed adopted for this research project of 4.5 km/h per hour from a study indicating older pedestrians walk at around 4.11 ft. per second (Knoblauch, Peitrucha and Nitzburg 1996). At this chosen scale it is possible for the observation points to be visible in the distance from at least one other observation point. The precinct will be centred on a social node and will include the transition spaces from the beach to the built environment.

The typological attributes of the beach precincts found on the Gold Coast are the social node, the access and transit pathways and their corridors, the access, recreational, principal and secondary built forms (Cartlidge 2011a). These attributes exist in some form in all Gold Coast beach precincts. The characteristics of the attributes that differentiate the precincts are found in the actual scale and size of each land use, the proximity of the transit corridor to the foreshore, the existence of a foreshore park in the access form, the relative position of the traverse path parallel to the beach and the nature of the transect path inland.

The typology constructed is intended to be used to select suitable case study areas for an analysis of the way their urban design allows or limits the public access, movement and activity for residents, tourists and visitors. The typological and urban design analysis will help to allow a structured comparison of the urban design attributes and characteristics of the selected beach precincts. It will do this by analysing the spatial arrangement and nature of the different forms, pathways for walking, and the nature of the edges and intersections of those paths and forms found in each precinct.

The application of the typology and selected design principle are expected to address the research questions that relate to how the different types of beach, their spatial arrangement, physical and urban design attributes affect people's purposive use of spaces and places in the Gold Coast beach precincts. The sections that follow will describe the attributes and characteristics of the typology and indicate how they will be used in the study.

2.2.1 The Social Node Attribute

The attribute of the social node is the social, recreational amenity or facility centre of activity in the access form adjacent to the beach. It may have different characteristics, such as a

children's playground, a covered seating area with adjacent BBQ, or, commonly on the Gold Coast, the Surf Life Saving Club (SLSC). It is often the visual focus, landmark or destination for many of the users of the precinct for either active or passive recreation. The intensity of use may vary by types of user, time of day and season and weather conditions.

The social node chosen to physically centre the case study area with a common social destination will be the SLSC. There are several reasons for this: SLSCs are usually located adjacent to the beachfront and public open space and facilities; their facilities are available to people with the necessary qualifications to enter the clubs, which are often the focus for club activity and events; and as Gehl observed 'people go where people are' (Gehl 2006). It is also a way of differentiating the precinct in the residential areas by a permanent, visibly dominant and common institutional destination for visitors to the beach in the case study areas selected.

Gold Coast SLSCs are usually located at the intersection of the traverse and transect paths in the beach precinct and within the recreational access form of the foreshore park. There is usually an adjacent or close pocket park that the club territorialises for club training and other activities and deploying or cleaning surf life-saving equipment.

2.2.2 The Access Corridor Attribute

The access corridors, as an attribute of the typology, are the traverse and transect walking pathways and their immediate surrounds. These corridors allow movement to and from the beach to the built forms, access and recreational forms and transit corridor. As the corridors pass through or past the social node, access, recreational and built forms they permit the user to choose to access opportunities for all the other activities, facilities and amenities that may exist in the precinct.

The nature of the characteristics of the traverse path parallel to the beach will be used to differentiate the degree of beach access, walkability, opportunity to connect to the beach and coastal views, amenity and facility of the public spaces along the path of the precinct for residents, tourists and visitors. This traverse path also functions as a promenading space and is the preferred route of the Oceanway project (Gold Coast City Council 2014c).

The corridors inland from the beach are the transect paths of the precinct. They will be used as a tool of analysis because they pass through the forms and edges or intersections of the different recreational and built forms adjacent to, and in, the public realm of the precinct. In doing so they are able to describe the changes that occur in the nature of forms of the precinct.

They are usually a gateway route from the transit corridor to the beach. Their urban design attributes will determine how well people can navigate and access the benefits, activities and amenities of the precinct.

2.2.3 The Transit Corridor Attribute

The transit corridor as an attribute of the typology is the major arterial route of travel for private and public transport. The transit corridor characteristics of location, design and width in relation to the beachfront are the key variable of the different precincts. The relative position of the transit corridor to the beach can be an important determinant of connectivity with the surrounding neighbourhoods and the wider city form and determine the degree of public transport accessibility. The permeability of the transit corridor also affects the social and economic value of the built form inland from the beach.

The transit corridor in the Gold Coast is the Gold Coast Highway which runs parallel to the beachfront at variable distances for nearly 40 kilometres. The range of distances to the beachfront is from 800 metres at Main Beach to within 50 metres at Burleigh Heads. This means the transit corridor it is not an attribute of all Gold Coast beach precincts. Typically in the Gold Coast beach precincts, the value of developments drops subject to two major influences. The first is proximity to the beachfront and associated views of the ocean. The second is the location on either the beach or inland side of the Gold Coast Highway. This can be seen from the unimproved land value and in the quality and level of development parallel to the Beachfront and the Gold Coast Highway (Wake *et al.* 2008)(Figure 2.2.3).

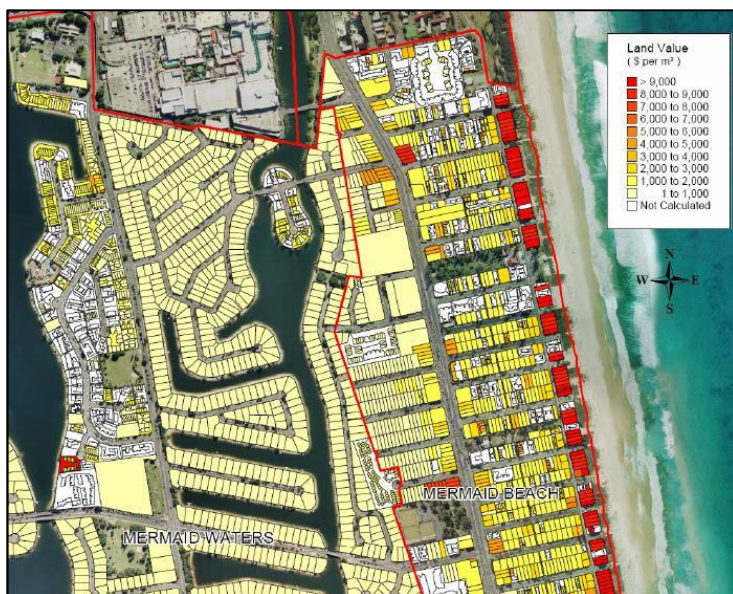


Figure 2.2.3: Indicative Unimproved Land Value Relative to Mermaid Beach (Wake *et al.* 2008)

This image also illustrates the principal and secondary built forms of the typology. The principal built form in this case is restricted to a strip of private homes along the beach. The secondary built form starts on the other side of the road running parallel to the beach (Hedges Avenue) and extends to the Gold Coast Highway where there is a discernible drop in economic value. This image also indicates that proximity to the beachfront is critical in determining property values in beach precincts.

This illustration also indicates that, in beach precincts without a foreshore park or public easement along the foredune, the private property lining the beachfront attracts all the benefits of adjacency to the beachfront to those particular private property owners. The principal built form is narrowed to a single beachfront plot width in this case of development. The road parallel to the beach also becomes a default transit route.

2.2.4 The Access Form Attribute

The access form is the most contested and variable form in the Gold Coast beach precincts. In places with foreshore parklands or esplanades, it extends from the beach to the built form and is the most significant part of the public realm of the precinct. A public foreshore or park also allows the access corridors to become part of the recreational and social space of the precinct.

Where development exists along the foreshore, the public realm of the precinct is largely restricted to the beach and any pocket parks on the beachfront. The traverse path becomes part of the movement space of the street parallel to the beach in the precinct and loses its social and recreational qualities. These characteristics of public access in beach precincts can be characterized as being of three general types:

1. Open Access, where there is no obvious public control of access to the beach from the foreshore except for the position and proximity of roads and parking relative to the beachfront. The public can walk straight on to the beach from the foreshore. This form of access can only be found along a short stretch of the foreshore park in Burleigh Heads. It has existed more widely in the past on the Gold Coast but has been replaced by:
2. Managed Access, where the public access to the beach is from a foreshore parkland, promenade or esplanade by means of an access path through dune vegetation, or a built entry point which may include steps and or ramps; and

3. Privatised Access, where entry to the beaches is from roads inland from the beach along stub roads with limited public parking and low levels of public amenity and facilities that do not support an extended stay at the beach.

The access form is the transitional space used by the public to access the beach. In a precinct with a foreshore park the access form is indistinguishable from the recreational form. Where the foreshore is privatised, the access form will be along a stub road or narrow pathway between private properties to the beach, with limited accessibility and few convenient parking spaces (Figure 2.2.4).

The relationship of the transect and traverse corridors with the access/recreational form, and principal built form will be the subject of an analysis of movement and activity field observations in this study. These corridors and the access form are the primary public space network of the precinct.



Figure 2.2.4: Privatised Access Form to the Beach, Stub Road in Mermaid Beach (Google Earth™ 2008)

2.2.5 The Recreational Form Attribute

The recreational form is the public space which supports movement on, along, to and from the beach and will be contiguous with the foreshore park or esplanade where they exist. It may be characterised by its being a transitional, temporary and negotiated social space for individuals and groups of people. It can be a managed and deliberate form that contains a variety of social and recreational opportunities for the user of the precinct from the foreshore to the beach and ocean or little more than a road and path along the beachfront.

There may be facilities that support extended stays and recreational opportunities for visitors which orient the use of the beach precinct towards particular user groups. The recreational form can also contain the access corridors within a foreshore park. Where the foreshore is privatised, the recreational form is restricted to the beach and any foreshore pocket park. The recreational form is also where many of the values held by different users and groups about beach precincts can be distinguished by empirical observation.

2.2.6 The Principal and Secondary Built Form Attributes

The principal built form enjoys the closest spatial relationship with the access form for residents, tourists and visitors. The buildings with the highest social and economic values in the beach precinct are located in the principal built form. The principal built form is also where the most intensively developed land in the precinct is usually found.

The secondary built form shares some of the characteristics of proximity to the access and recreational forms as the principal built form, but is a greater distance from them. It is usually beyond the transit corridor and is often characterized by a sharp fall in value, socially and economically. If the transit corridor is difficult to cross, the decrease in value is often sharp and the secondary built form may be in need of regeneration. In suburbs where the principal built form is along the beachfront, the drop in value occurs on the inland side of the adjacent street (Figure 2.2.3).

The sharp drop in value of the principal built form to the beachfront is found where there is no public foreshore park. This phenomenon is observed along Hedges Avenue in Mermaid Beach (figure 2.2.6). The contrast in value and standard of property on the beachfront and inland side of the street is striking on a street with some of the most expensive beachfront homes in Australia (Crerar 2013). It can also be observed in other places around the world

where private apartments, hotels and homes are built along the beach, such as Speedway in Santa Monica.

The aesthetic and functional features of the built forms will affect the social and recreational opportunities present in the precinct. The edges of the principal built form facing the access form are of particular importance in supporting extended stay and recreational activity in the precinct. Uniform development of resorts or apartments without active street frontages on the edge of the principal form facing a foreshore park will have little social or functional value for non-residents. In this study the dominant land use of the built form has been used, along with the degree of public access, to typify the Gold Coast beach precincts.



Figure 2.2.6: The Principal and Secondary Built Forms in Mermaid Beach Along Hedges Avenue (Author 2012)

2.3 The Different Types of Beach Precincts of the Gold Coast

Land-use mapping is an established practice in planning (Hall 2002). For the construction of the typology, the land use mapping conventions used by the local council (Gold Coast City Council 2011b) were too generalised to urban form and not aligned to the purposes of this

study. A broader analysis of the land uses was used rather than a strict designation of each building or space.

The analysis of the land use had to be through commonly recognisable urban forms because of the intent of the research to adopt a walker's perspective of the spaces and places of the precincts. The walking approach taken is expected to identify the nature and context of the precincts through an impression of place consistent with the perspective of most reasonably informed tourists or visitors.

Precincts along the Gold Coast city ocean coast were examined for their current relative spatial arrangement of land use, pathways, beach and foreshore, amenities and facilities in public space and along their commercial edges. The beach precincts of the Gold Coast all have a primary spatial orientation with the foreshore and the beach.

This spatial configuration of land uses, pathways, amenities and facilities allows activities and social nodes to develop or exist. For instance, a primarily domestic tourist precinct has the capacity to be recreational and commercial at the same time because of the location and nature of public spaces and commercial edges.

The survey of the Gold Coast identified six broad types of beach precincts typified by the dominant land use of the principal built form. These are: residential, tourist, recreational, civic, commercial, and hybrid. It was found that the typology developed was both robust and applicable for coastal precincts in scoping basic types of precincts in all the Australian and overseas locations examined using Google Earth™ and Street View™. In addition to the six broad types found on the Gold Coast, some places could be a port, manufacturing and industrial beach precinct types such as Port Kembla in New South Wales, Australia and El Segundo in Los Angeles, California.

The precincts are defined in the typology by the spatial arrangement of the attributes of the typology, the dominant use of the principal built form and the degree of public access to the beach and foreshore. The different types of beach precinct found on the Gold Coast are described as follows.

2.3.1 Residential Precincts

Residential precincts (Figure 2.3.1) are places which are primarily residential communities with a local level of shopping and facilities. They are places where homes are often built on

the crest of the beachfront dune. In the Gold Coast they are usually of a homogenous housing character as the homes were all built at around the same period. These precincts have the highest percentage of permanent residents of the Gold Coast beach precincts. The homes and apartments in the precinct may also be leased for short periods during the year by owners who are not permanent residents. The transit corridor in many of the residential precincts is often located at a distance from the beachfront which discourages casual visitation.

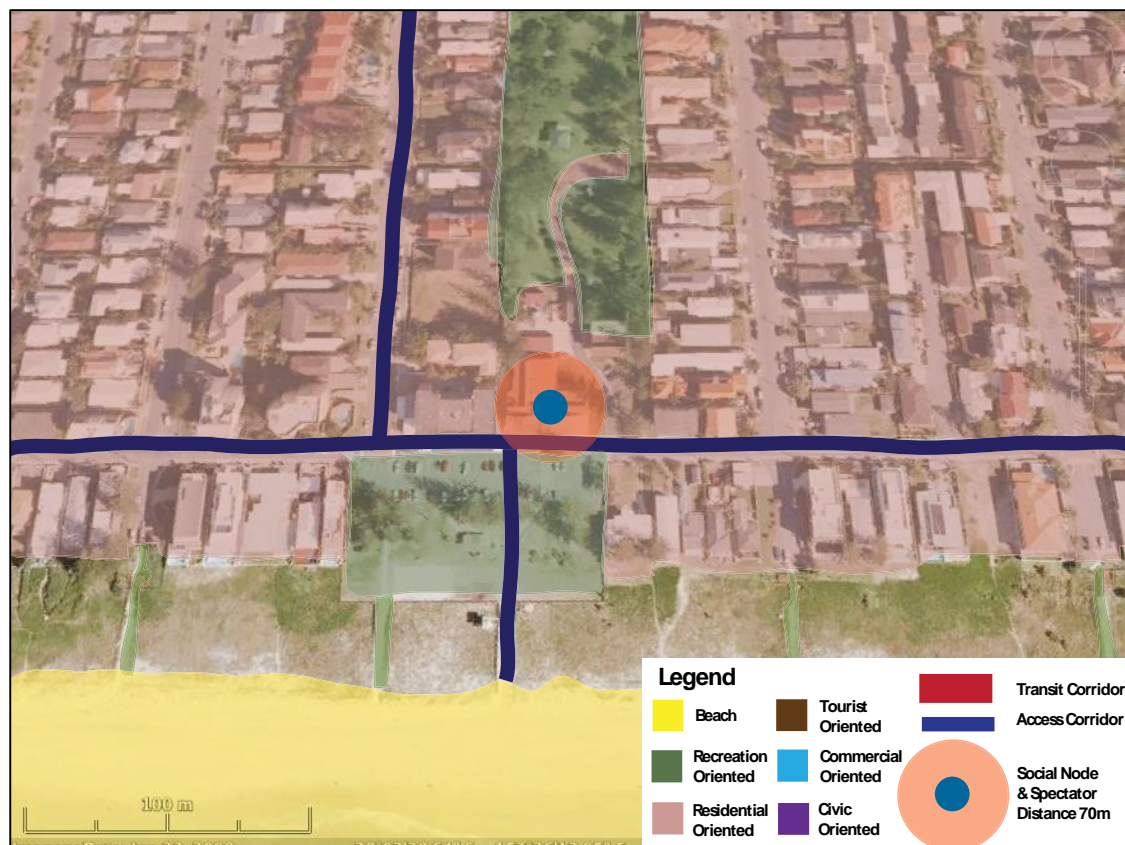


Figure 2.3.1: Mermaid Beach Residential, Privatised Access Precinct (Author, 2010; Google Earth™ 2008)

2.3.2 Tourist Precincts

Tourist precincts (Figure 2.3.2) are places where the land use of the principal built form is dominated by tourism. Some Gold Coast precincts are organised around domestic demand, self-catered apartments and built-in car parking facilities for self-drive tourists. Other precincts are organised to cater for fly-in tourists with hotels, resorts and coach or car hire travel (Faulkner and Tideswell 2002). The majority of tourists in the Gold Coast are domestic and come from other places in Queensland, Victoria, New South Wales and other Australian States and Territories (Australian Bureau of Statistics 2002).

Domestic tourist precincts are places that have a predominant orientation as a regional and inter-state destination to meet the tourist preferences for going to the beach, eating out, shopping and sightseeing (Faulkner and Tideswell 2002). They may be marketed to families, specific age groups or as recreational destinations for activities – such as boating, golf or surfing. North Burleigh, Kirra and Coolangatta are suburbs where the domestic tourism precincts are found on the Gold Coast.



Figure: 2.3.2: North Burleigh Domestic Tourist Precinct (Author, 2010; Google Earth™ 2008)

The fly-in tourism precincts have a predominant orientation as an interstate and international destination, with an identity that may be known or marketed to international tourists. These are places that have international hotels and resorts marketed as destinations in their own right. In the case of the Gold Coast these are places such as Surfers Paradise and the Broadwater Marina precinct.

2.3.3 Recreational Precincts

Recreational precincts (Figure 2.3.3) are places where the orientation of the precinct and the relationship with the foreshore, beach and ocean is dominated by recreational uses. These precincts have parks, open green spaces, and sometimes sports fields managed by the Council.

In some places they have significant areas of native vegetation such as Burleigh Heads National Park and The Spit, which are lightly developed with paths and tracks or areas which are managed to be off limits to public access. This restriction of public access may also be managed by limited parking or provision of facilities which support extended visitor stays. Recreation precincts are usually oriented to a recreational activity or cluster of activities and may have local, regional or state centre significance.

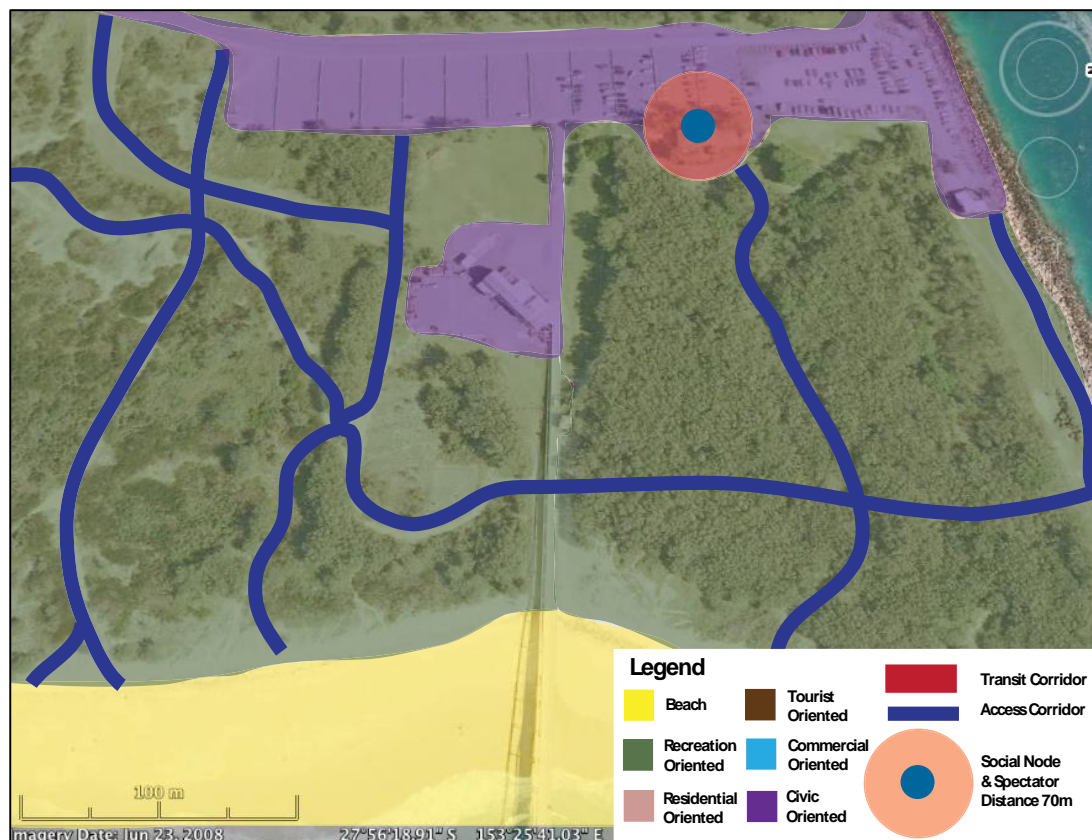


Figure 2.3.3: The Spit Recreation, Managed Access Precinct (Author, 2010; Google Earth™ 2008)

2.3.4 Civic Precincts

Civic precincts are places that have an orientation to the functions of a city, with law courts, police stations, tertiary educational facilities, government offices, hospitals, community facilities and retail development. They may have a tourist function as a destination but are not solely oriented to providing accommodation and facilities for tourists. Civic precincts are highly contested in their use of public space and the number of activities, destinations, events, and recreational uses will be highly meshed in this type of precinct. These precincts are places of very high visitation from throughout the region as people access specialist services, jobs, health, recreational and other activities and facilities. There are no beachfront civic precincts on the Gold Coast.

2.3.5 Commercial Precincts

Commercial precincts are places that have an orientation to the retail and service functions for local populations, such as real estate, lawyers, banking, fashion, chemists, grocery, food stores and others that are needed on a regular basis. The Burleigh Heads shops and restaurants area of James and Connor Streets are an example of a commercial precinct on the Gold Coast that is close to, but not on, the beachfront. Coolangatta and Broadbeach Mall are similar commercial precincts.

2.3.6 Hybrid Precincts

Hybrid precincts (Figure 2.3.6) are a common type found along the Gold Coast beachfronts. The hybrid precincts on the Gold Coast are often a mix of recreational, residential and commercial land use in separate blocks within the precinct. They are not blended, mixed use but a zoned mix of uses in designated areas within the precinct. This means that there is no single dominant land use but various combinations of different types of use within the area of the beach precinct. As such, they are not considered mixed-use precincts in the meaning ascribed to mixed use by New Urbanists (U.S. Green Building Council 2010). Palm Beach is an example of a hybrid commercial precinct with privatised access.

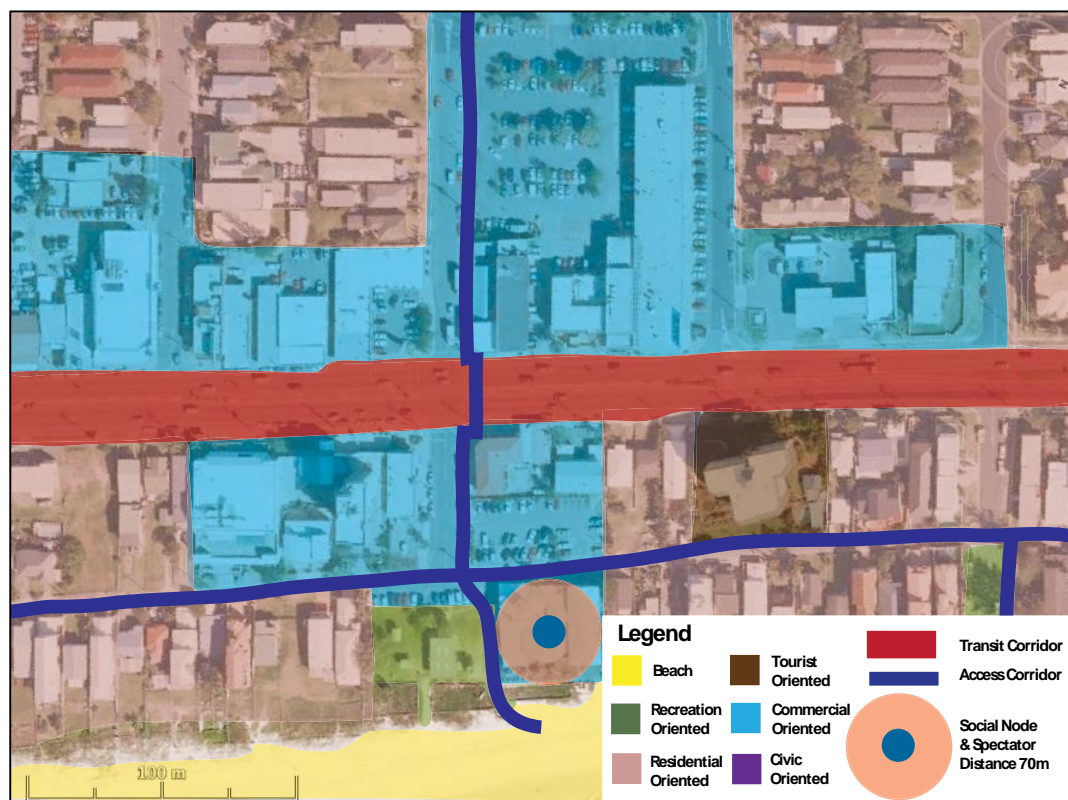


Figure 2.3.6: Palm Beach Hybrid Commercial Precinct (Author, 2010; Google Earth™ 2008)

Having reviewed the literature and analysed the attributes of an urban typology of different places that could be useful in constructing an urban beach typology, desirable attributes that matched the research intent were identified. This typology will be used to select three beach precincts for the location of the case study in the following section.

2.3.7 Selecting the Beach Precincts for the Case Study Areas

The initial survey and typographic analysis were used to select three beach precincts on the central Gold Coast beach frontage that could be centred on a Surf Life Saving Club and had different types of public access through some form of foreshore parkland or pocket park. The other criteria for selection of the beach precinct case study areas were that the precincts should represent residential, tourist and hybrid principal built form precincts and be in the central Gold Coast.

Precincts in the central Gold Coast are available to the same inland populations that are channelled to the coast along the Broadbeach Nerang and Reedy Creek arterial roads (Figure 1.5.1). This should mean that they are comparable destination choices. It is also more practical for a single researcher to travel to beach precincts within reasonable distance of each other.

The initial survey identified that some precincts had a degree of overlap or that there was a shift of social focus in an area with a number of dominant destinations within a short distance. For instance, in Burleigh there are four identifiable precincts in the suburb that could be centred on the cafes and shops, the national park, the surf club and the children's playground.

The identifiable central Gold Coast beach precincts that could be centred or focused on a surf club social node included Broadbeach, Broadbeach Kurrawa, Burleigh Heads, Mermaid Beach, Miami, Nobby's and North Burleigh. The precincts with a residential principal built form typology are Mermaid Beach, Miami and Nobby's. Of these only Mermaid Beach and Miami have a foreshore parkland and Miami is both a residential and tourist precinct with a caravan park and tourist apartments. The precinct around Mermaid Beach SLSC was selected as the residential type representative. Although it only has a pocket foreshore park, it is the precinct with the most permanent residents of the group (Willoughby 2012a).

The precincts with an identifiable tourism principal built form include Broadbeach, Broadbeach Kurrawa and North Burleigh. Broadbeach was considered to be an isolated location with a truncated foreshore park. Broadbeach Kurrawa was favoured over North

Burleigh for the size of its foreshore park and the more diverse nature of the adjacent tourist principal built form, as well as its historical role as the home of the Australian Surf Life Saving Championships (Surf Life Saving Australia 2014).

Burleigh Heads was selected as it is representative of the hybrid type with its commercial, recreational, residential and tourist principal built forms. It is also an iconic surf beach (Farmer and Short 2007) and is often referred to anecdotally as the best beach destination on the Gold Coast (Australian Associated Press 2012).

Having selected three representative beach precincts for the case study, the typology will be used to assist the research in selecting appropriate places in each of the precincts for the urban design analysis and field observations. In doing so it will allow meaningful comparisons of similar places in each of the different types of beach precinct studied.

2.4 Applying the Typology to Describe the Attributes of the Selected Beach Precincts

The typological analysis in this section addresses the subsidiary research question: ‘What are the spatial and physical relationships in the different types of beach precincts on the Gold Coast?’ It informs the research question of how well the different beach precincts meet the preferences and values of users of those precincts.

This section also investigates the proposition made in section 1.8.2 that: ‘The design solution for the built environment of the beach precinct has parameters that are contextualised by the typographic spatial arrangement and orientation of the typographic elements to beach access and beachfront’. This proposition indicates that the morphological dimensions of the beach precincts, such as allocated and permitted land and building use, public space and street patterns, are important in creating a shape, size, scale, and orientation of place aligned to its intended use and the dominant cultural values of those who made the decisions to allocate public and private spaces for particular uses and activities (Conzen 1960).

How the shape, size, scale, and orientation of forms are aligned to intended uses reflects the political-cultural values of the dominant identities and project groups who have made those decisions. In particular, the typology reveals the way those decisions created land ownership and the allocation of public and private land to different uses to support different favoured activities. In beach precincts, the decisions of the past also physically resolved the current degree of public access to the restorative environment of the foreshore, beach and ocean.

They determined who would benefit from the location of private and public property in relationship to the natural environment.

The urban beach typology has identified the nature of the natural, access and principal built form and the transitions between one form and another as critical to understanding how a beach precinct meets cultural needs and preferences for activity and use of spaces and places. The typological analysis, the later urban design analysis and the field observations of activity and visitation will all use the attributes of the urban beach precinct typology (Cartlidge 2011a) developed for this thesis to locate the observation points and focus the research on the important shapes, sizes, spaces, forms, edges and layout of the precincts.

The typological analysis of the selected beach precincts is designed to contribute to a layered understanding of the nature of the precinct from the perspective of the visitor on foot, not the design, build or governance professionals who have been responsible for the allocation, orientation, construction, provisioning and ordering of the public and private spaces of the precinct. This is from the perspective that replicating the methods of the architect or land use of transport planner would likely replicate their professional practices and bias to the survey and analysis of place.

The observation points for the typological and urban design analysis are located along the traverse and transect pathways from the principal built form, through the transitional space of the access form to the beach. These pathways cross the intersections of the different forms and pass the amenities and facilities along their routes. The pathways connect different land uses and destinations to allow people choice and opportunity to access the important relationships between activities, preferred behaviours and public access to the inherent benefits and functions of a beach precinct.

For a visitor to the beach precinct three types of location were regarded as providing the most information about the nature of the spatial patterns and arrangements of public and private spaces that allow for people to meet their expectations, preferences and values of beach precincts. All these locations are in transitional places between environments along pathways within the public realm, and they relate to the degree of public access to the inherent benefits and functions of the beach precinct (Figure 2.4).

The three types of location for the survey and analysis are the social node, beach access point and the intersection on the transect pathway of the access form to principal built form. The

chosen size of the precinct (section 2.2) allows for the single researcher to be in view of at least one other observation point in the precinct, creating spatially interrelated data of a walkable space.

The social node has been determined previously to be located at the Surf Life Saving Club building along the traverse path and its connection to the transect path (section 2.2.1). The beach access locations in a beach precinct with a foreshore park will be either side of the social node, and where possible, at the intersection of the traverse path with another transect path within the precinct. The access form change will be located along the transect path where it passes from the access to the principal built form.

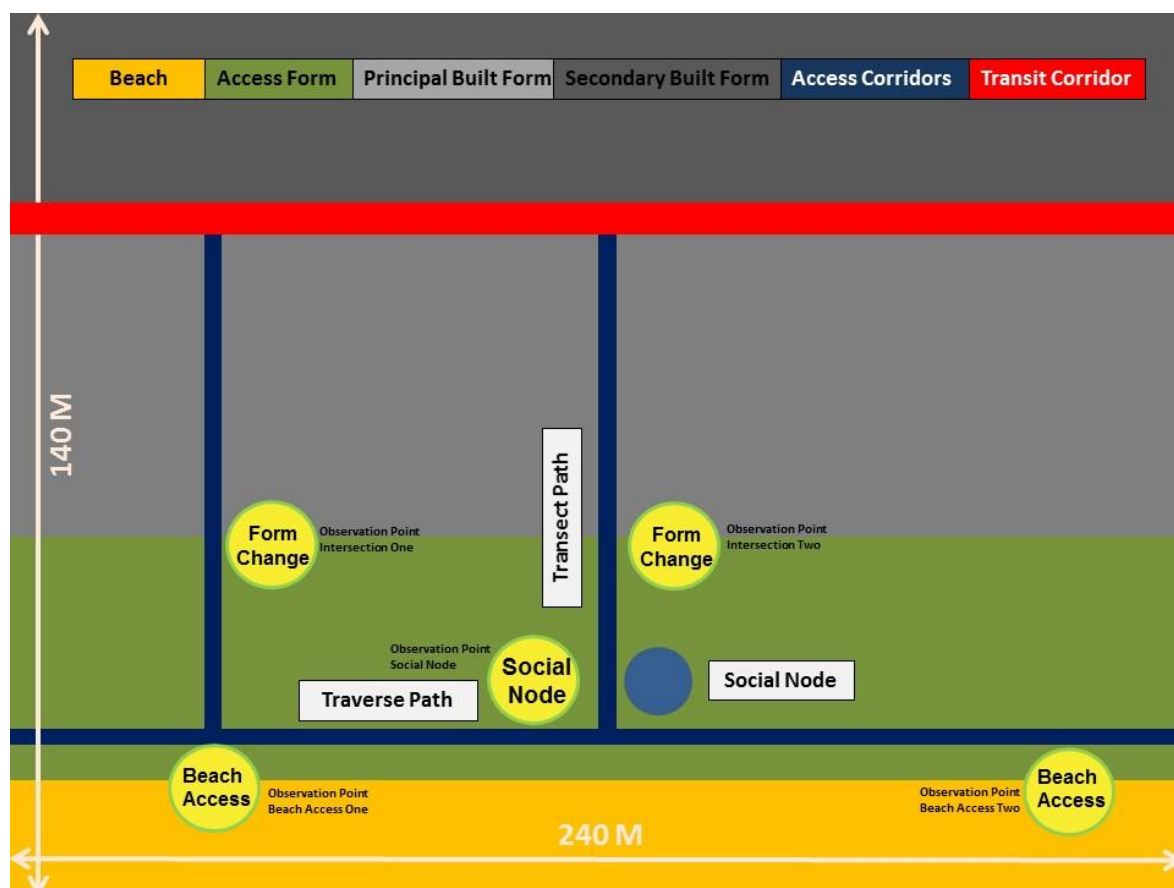


Figure 2.4: The Observation Points for the Survey and Analysis of the Beach Precincts (Author 2013)

In the beach precinct without a foreshore park, the beach access is located where the transect path meets the foredune and beach. The social node will be located near the SLSC building and changes of form observation location are either side of the SLSC at the intersection of the traverse and transect pathways along the precincts roads. No observation points were located inland of the form change.

The typological analysis of the different beach precincts in the following sections describes the key spatial and physical relationships of the typology of those precincts. This analysis is organised by the following characteristics of each precinct as they relate to the:

1. Contextual information that may have historically and politically influenced the pattern of spatial design, arrangement, orientation and land use of the different typological attributes of the different beach precincts; and
2. A description of the typological attributes of land use allocation of the different forms, the nature of the physical and visual connection of the public access to the beach, the traverse and transect pathways and the location of the observation points along those pathways, the transitions from the built form to the access form and the access form to the beach and ocean.

The information revealed in the typological analysis can be used to explain how the design solution for each type of beach precinct allows opportunity and choices for activity and behaviour in the beach precinct to fulfil the needs and desires of visitors and residents of that beach precinct.

2.4.1 Contextual Background for the Broadbeach Beach Precinct

The Broadbeach precinct centred on the Kurrawa SLC is a precinct in a suburb which the Queensland state government has designated as a major regional activity centre (Queensland Government 2009). The immediate location is allocated to public open space and ‘central mixed use’ in the Gold Coast planning scheme. Interestingly, Broadbeach has the lowest percentage of 0-14 year olds at 5% of the population compared to the state average of 20.4% (Australian Bureau of Statistics 2005).

The Kurrawa SLSC is visible from most places in the very large foreshore park. Kurrawa SLSC on the Gold Coast was, for many years, the location for the Australian Surf Lifesaving Championships. Clubs from every state in Australia travelled to compete at Broadbeach and they needed large areas of land to keep their surf boats. During the 2012 Championships the entire park was used to store competitor’s boats and boards as well as temporary tents, vehicles, food outlets and commercial displays (Figure 2.4.1).

The Broadbeach foreshore park is also used throughout the year for a series of Sunday markets, music, film, food and wine festivals, fairs, firework displays, concerts, social and club gatherings and other formal and informal activities (Gold Coast Tourism 2013). All

these factors may explain the relatively large open grassed spaces, the widely distanced facilities, the location of the SLSC building and the size of its carpark.

There have been three drowning's since 1996 at the Australian Surf Life Saving Championship held at the Kurrawa club and this has led to calls for the event to be relocated to 'safer' beaches on the Gold Coast (Murphy and Kwek 2012).



Figure 2.4.1: The Foreshore Park Broadbeach during 2012 SLSC Championships (Author 2012)

2.4.2 Typological Description of the Broadbeach Beach Precinct

The land use allocation of the principal built form is dominated by apartment and resort towers that range from 20 to 35 storeys in the immediate locality of the beach precinct (Gold Coast City Council 2008). The apartments, resorts, shopping centre, pedestrian mall, restaurants and cafes along Victoria Avenue are all screened from the foreshore park at ground level by high walls or plantings.

The largest space in the beach precinct is allocated to the access form of the foreshore park, parking, SLSC building, toilet and shower block. The foreshore park is around 40 metres wide at its narrowest point at the Kurrawa SLSC car-park, increasing to around 100 metres opposite Victoria Avenue. The arrangement of spaces and facilities in the access form is oriented to support recreation and events. Most of the public park amenities of covered seating, children's playground and barbeques are found in the foreshore park (Figure 2.4.2a).

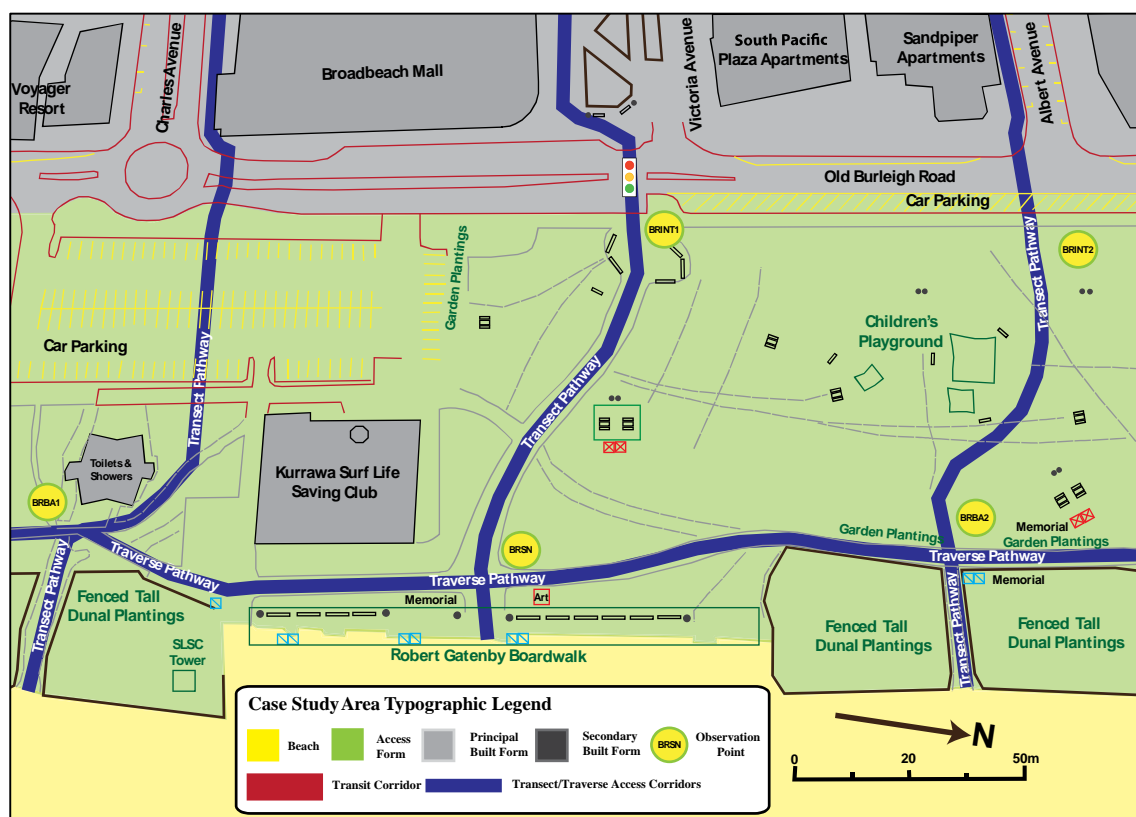


Figure 2.4.2a: The Typographic Attributes of the Broadbeach Beach Precinct (Author 2012)

The physical attributes of the built environment in this precinct limit the understanding of the principal built form from the access form and vice versa. There are private views to the ocean on the higher floors of the residential towers along and behind Old Burleigh Road. However, there are no public views of the ocean and beach from the principal built form or along most

of the length of the traverse path within the foreshore park, as the geomorphology of a rising dune on the beachfront and the extensive dunal plantings obstruct any ground level views towards the beach and ocean.

The traverse path extends along the entire length of the foreshore park precinct on the landward side of the foredune crest within the precinct and is about 1130 metres long. When it finally exits the northern end of the foreshore park this pathway continues along Broadbeach Boulevard. The southern end of the traverse pathway leaves the foreshore park and enters Hedges Avenue.

In the northern part of the foreshore park, the fenced dunal plantings and garden plantings alongside the traverse path in the northern end of the foreshore park create a framed view along the traverse pathway. There are also views across the park to the principal built form from the northern beach access point to Victoria Avenue and the Oasis Shopping Centre. The northern section of the traverse path allows the walker the opportunity to access the beach, use showers, seating, children's playground, covered bench tables and BBQs and open grassed spaces in the foreshore park.

The transect path from the northern beach access point is an informal route through the foreshore park past the children's playground and crossing Old Burleigh Road through parallel parking to Albert Avenue towards resort apartment towers lining both roads. At the far end of Albert Avenue the walker can access shops, cafes and restaurants on Surf Parade (Figure 2.4.2b).

The traverse path continues south along and behind the fenced dunes and between the Robert Gatenby Boardwalk and the Kurrawa SLSC where the social node and beach access is located. It continues to the location of the southern beach access point near the public toilet and shower block. The traverse path in the beach precinct allows the walker to choose to access the beach through fenced paths or by using the boardwalk.

The central transect paved pathway from the boardwalk connects the beach and ocean to the shops, resorts, cafes and restaurants in Victoria Avenue going past the Kurrawa SLSC and BBQ facilities and across the Old Burleigh Road traffic lights. Victoria Avenue eventually reaches the transit corridor of the Gold Coast Highway located about 480m from the boardwalk past Surf Parade.



Figure 2.4.2b: View of the Children's Playground from the Traverse Path in Broadbeach (Author 2012)

2.4.3 Contextual Background of the Burleigh Heads Beach Precinct

The Burleigh Heads beach precinct is in a suburb that has diverse built, public and natural environments. A heritage and character study of the suburb identified five distinct precincts: foreshore, beaches and headlands; the esplanade; commercial centre; Burleigh Ridge residential and Burleigh Headland tourist and residential area (Environmental Resources Management Australia 2010).

The study highlights the social, cultural, historical, physical and symbolic elements found in the town of Burleigh Heads that interact and affect each other. This can be seen in the following images of the recent National Surfing Reserve marker, the reference to a long gone theatre now used for shops and cafes, the ANZAC memorial, the Burleigh Heads National Park, and the visual link to the early Australian beachfront of Manly with the rows of Norfolk Pines and Aboriginal figures on the gable of the small shelter (Figure 2.4.3).



Figure 2.4.3: Historic and Symbolic Images found in Burleigh Heads (Author 2013)

Burleigh Heads is one of the oldest settlements in the coastal area that would become the Gold Coast City with homesteads, a hotel and store established in the 1870s. Burleigh Head or Big Burleigh is also associated with dreamtime myths of the Indigenous Kombumerri people (Hanlon 1935). However, it was not until the interwar period that a small town began to take shape as a holiday venue (Environmental Resources Management Australia 2010).

The cultural landscape of Burleigh Heads, as a consequence of its history, is also one of the most layered on the Gold Coast. The ocean off the headland is the location of the launch of pro surfing in the '77 Stubbies Classic'. It was also listed by the Australian Commonwealth Government as a National Surfing Reserve in June 2012 (Baker 2012).

It is thought that the cultural and social attachments to distinctive places formed by residents before the era of the car led to the preservation of an earlier type of beachfront in the township. However, the more recent development found along The Esplanade and inland from Goodwin Terrace shows the influence of the American beachfront development patterns on previously undeveloped land in the Gold Coast.

The effect of the existing cultural landscapes for residents and non-residents with social and historical ties to particular urban characteristics of Burleigh Heads are suggested to have

made redevelopment in a fully American pattern unlikely. Local, politically dominant and project interests in Burleigh Heads would be able to mobilise popular support by calling on the layers of cultural attachment to place to resist or modify development of the open spaces of the beach precinct (Marschke 2011).

The cultural values in the patterns of land use and activity in Burleigh Heads are those that preserve open spaces such as the Memorial Park, activities such as the Burleigh Bowls Club and low cost tourist destinations such as the caravan park in Burleigh Beach Tourist Park, off Goodwin Terrace. All these elements are unlikely to be included in contemporary beachfront development. However, they each contribute to a sense of place that differentiates Burleigh Heads from the many kilometres of less distinctive beachfronts found on the Gold Coast.

2.4.4 Typological Description of the Burleigh Heads Beach Precinct

The land use allocation of the principal built form is a mixture of commercial, recreational, residential and tourist uses. The beach access is considered open access as, in most parts of the beach precinct, it is possible to step from the traverse pathway directly onto the beach. This makes the Burleigh Heads beach precinct a hybrid type with open beach access.

Public or publically accessible recreational space is a dominant element of the typology of this beach precinct. As well as the foreshore park in the access form, the Memorial Park and Burleigh Heads Bowls Club in the principal built form create a sense of green open space that crosses the Gold Coast Highway transit corridor (Figure 2.4.4a). This allows some visual connections to the beach and ocean from the many different locations in the public and private spaces of the principal built form.

The extension of recreational use of the Memorial Park and Bowls Club in the principal built form across the transit corridor is a significant factor in the spatial arrangement of Burleigh Heads beach precinct. Although the highway is a very busy one and there is extensive car parking within the foreshore-park, the sightlines from the buildings along Goodwin Terrace, Connor Street and the Esplanade give frequent visual connection to the beach and ocean horizon,

This spatial arrangement effectively brings the sense of a seaside location much deeper into the built form than the other case study areas. Burleigh Heads is the only beach precinct in the central part of the Gold Coast where drivers and public transport passengers can experience a sense of arrival at the seaside as they enter the precinct by road. The park, beach

and ocean are all visible as they emerge from behind the buildings along the Gold Coast Highway.

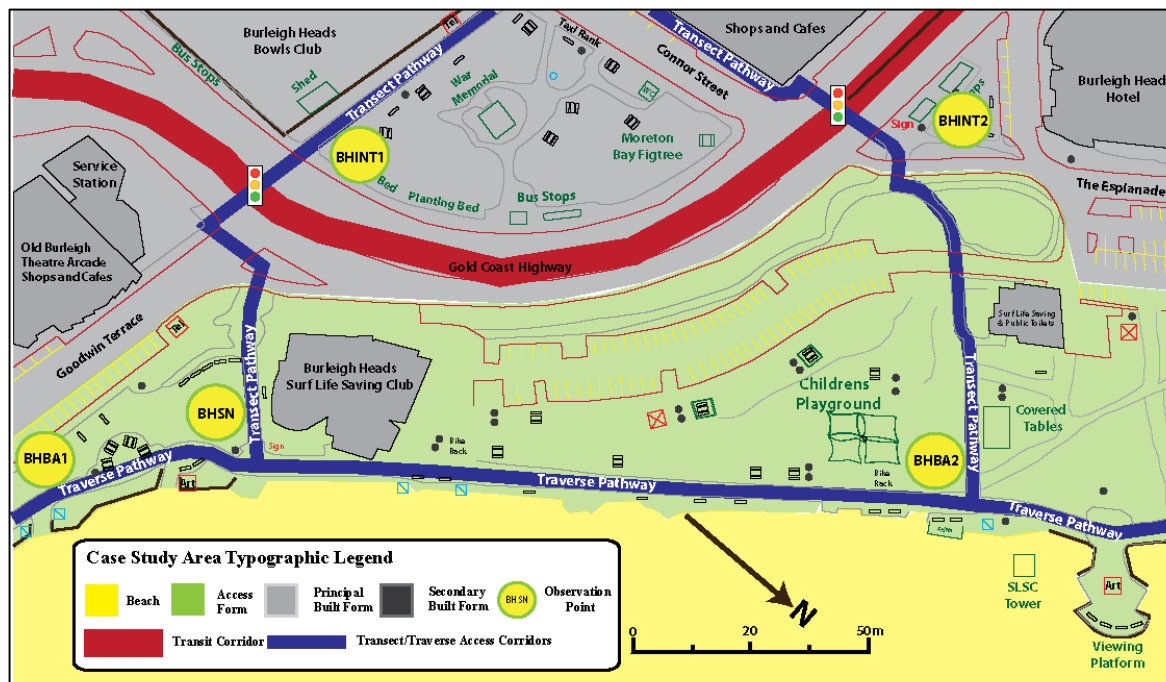


Figure 2.4.4a: The Typographic Attributes of the Burleigh Heads Beach Precinct (Author 2012)

The views from the foreshore park in the access form include views up and down the coast and out across the beach to the horizon. These views include those along the beach to Surfers Paradise, out to the ocean and towards Burleigh Heads National Park as well as views inland to the Burleigh Hill ridge that extends from the National Park. This spatial arrangement of open space combined with the local geo-morphology creates a sense of enclosure and openness in different locations in the beach precinct.

The transit corridor of the Gold Coast Highway comes within 60m of the beach in this precinct, making it a very influential attribute of the Burleigh Heads beach precinct typology. Because it is so busy, all pedestrian movement across the highway is directed to two traffic crossings.

The Gold Coast Highway and the large parking lot in the foreshore park contribute to traffic dominating movement, activity and sensory experience in the open spaces along the highway. Traffic is thought to influence the location of the children's playground and other public facilities that support activities, as they tend to line the furthest edges of the parks from the highway.

The traverse path travels along the beachfront connecting different coastal destinations and locations within the precinct and beyond. To the south east of the precinct the traverse path continues past restaurants, an indoor pool, BBQ facilities and children's playground to an area where people sit and watch surfers at the entrance to the Burleigh Heads National Park entrance about 440 metres away.

The linear foreshore park North West of the beach precinct is planted with rows of Norfolk Pines and has parking lots, BBQ facilities, covered seating areas with table benches and sometimes small children's playgrounds. There is also outdoor gym equipment located just off the traverse pathway for the length of The Esplanade section of the foreshore park. The Esplanade also has resorts and apartments along its entire length and many people use this long pathway in the morning and evening for exercise.

The route of the traverse path in the beach precinct starts near the beach access point in the south east of the precinct. Here it runs parallel to the beach and provides visual connection to the beach and ocean with attractive views extending to Surfers Paradise and South Stradbroke Island on the horizon. It continues around a curve in the beach with constantly changing views till it passes the social node changing direction to the north-west.

The social node chosen for the precinct is Burleigh Heads Mowbray Park SLSC (referred to in the thesis as Burleigh Heads SLSC). This club is a successor to Burleigh Surf Life Saving established in 1925 and the Brisbane-based Mowbray Park Life Saving Club (Whitmore *et al.* 1998). The club building is a focal point that is visible from most places in the beach precinct.

The traverse path travels past the SLSC building and from there to the second beach access point near the viewing platform. There are no fences separating the pathway from direct access to the beach (Figure 2.4.4b). This arrangement creates a direct connection from the activities in the foreshore park to the benefits of beach and ocean activities, views and the restorative natural environment.

The southern transect path connects the traverse path to the principal built form along a route past the Burleigh Heads SLSC across traffic lights at Goodwin Terrace and the Gold Coast Highway. The observation point for the first change of form is located just beyond the traffic crossing in the Memorial Park. The transect path continues between the Burleigh Heads Bowls Club and the Memorial Park to the shops, businesses, cafes and restaurants of Connor and James Streets.



Figure 2.4.4b: The Traverse Path Adjacent to the Beach in Burleigh Heads Beach Precinct (Author 2012)

Walkers are constrained to using the transect paths from the access form to the principal built form and most people conform to use the pathways constructed to direct them to the traffic crossings. There is a preferred direction from the foreshore park to the bus stops, Memorial Park, bowls club and destinations in the principal built form across the Gold Coast Highway around the northbound bus stop location, although only younger adults, especially males, were seen to risk the traffic.

The northern transect path near the viewing platform connects the traverse path to the hotel, shops, cafes, apartments and resorts along The Esplanade. It travels past the children's playground, park seating, covered bench tables, toilet/changing rooms and SLSC storage facilities to the traffic crossing and bus stops on the Gold Coast Highway and to the shops, businesses, cafes and restaurants of the Gold Coast Highway, Connor Street and James Street and the Memorial Park. The second change of form observation point is located in the small space near the bus stop.

2.4.5 Contextual Background for the Mermaid Beach Precinct

The Mermaid Beach Precinct is centred on the park in front of the Mermaid Beach A.E.M.E (Australian Electrical and Mechanical Engineers) SLSC in a residential suburb in the centre of the Gold Coast that has no other public open space on the beachfront. Indeed, the pocket park in front of the SLSC is the only foreshore park in the suburb. The main route in this beach precinct is along Hedges Avenue which, with its continuation as Albatross Avenue, connects Old Burleigh Road in Broadbeach to Marine Parade in the neighbouring suburb of Miami (Figure 2.4.5a).



Figure 2.4.5a: The Mermaid Beach Suburb and SLSC Location (Google Earth™ 2013)

This situation creates a continuous stretch of about 2750 metres of beachfront private homes and apartments in the physical centre of the city. Hedges Avenue is a featureless residential streetscape for walkers with no shade, rest, amenity or facility for walking visitors to the beach. If it were not for the beachfront location and the wealth and prominence of some of its residents (Stolz and Jensen 2008) Mermaid Beach would be an unremarkable, unimaginative and monotonous residential subdivision with very little social, cultural, architectural, visual or historical distinction.

The wealth and influence of some of the residents appears to be a factor in the successful opposition to the ‘Oceanway’ project and efforts to exclude outsiders enjoying the beachfront (Bedo 2010b). This design for exclusion of the ‘outsider’ starts at the Gold Coast Highway

which is up to eight lanes wide with a central reservation, fenced to deter people crossing by foot. The Gold Coast Highway has no right turns travelling north in the suburb to get to the pocket park and no signage to the beach for left turns travelling south. A further deterrence to visitation is that Hedges Avenue is a one way street, with no parking along its length.

Another example of reserving the amenities and facilities of the suburb is to be found in Mermaid Park, just outside of the beach precinct. This ‘hidden’ park is located behind the Surf Life Saving Queensland (SLSQ) regional office on Hedges Avenue. The park is neither signed nor visible from the surrounding streets although it is visible from the Gold Coast Highway. The screened design of this park appears to be intentional although it is publically owned and maintained. It is largely used by SLSC members and local residents (Figure 2.4.5b).



Figure 2.4.5b: Mermaid Park: Hidden to Outsiders by the Surrounding Streets (Author 2012)

The roads within the suburb also favour cyclists (who are more likely to be beach suburb residents) over walkers and cars, as they can use Hedges Avenue as an alternative to commuting along the Gold Coast Highway (Bedo and Killoran 2011). Cyclists, unlike cars, can travel both ways along Hedges Avenue. Cyclists also have their own half of the road to travel along as well as being permitted to use the pavements. This relegates walking to a third

class mode of movement in the precinct (Figure 2.4.5c). Walkers also have to navigate narrow paths around bins along the footpaths on collection days (Syrvet 2010). The short driveways fronting the street, screened by high walls, are also a common hazard for walkers when cars suddenly back out or emerge onto Hedges Avenue (Elder 2011).



Figure 2.4.5c: The Engineered Dominance of Driving and Cycling along Hedges Avenue (Author 2012)

2.4.6 Typological Description of the Mermaid Beach Precinct

The residential nature of the Mermaid Beach precinct is reflected in the typographic attributes of the precinct. The principal built form in this precinct only extends to the homes and apartments along the beachfront side of Hedges Avenue. This makes Mermaid Beach the only precinct with a secondary built form located within the beach precinct. The Caffè Republic and the SLSC in this secondary built form provide the only commercial support to visitation in the precinct, as all the other buildings are privately owned (Figure 2.4.6a).

The access forms in the Mermaid Beach precinct are constrained by fences and parking. The pocket-park, with the southern beach access point, is enclosed by homes with tall blank walls and the adjacent car park off Hedges Avenue. The steep dunal profile of the beach prevents

the public from viewing the beach until they reach the public beach access points and viewing platforms among the dunes. The access form in the stub end of Ventura Road, with the northern beach access point, is similarly enclosed by private property walls and parking, but with less amenity and facility than the pocket park.

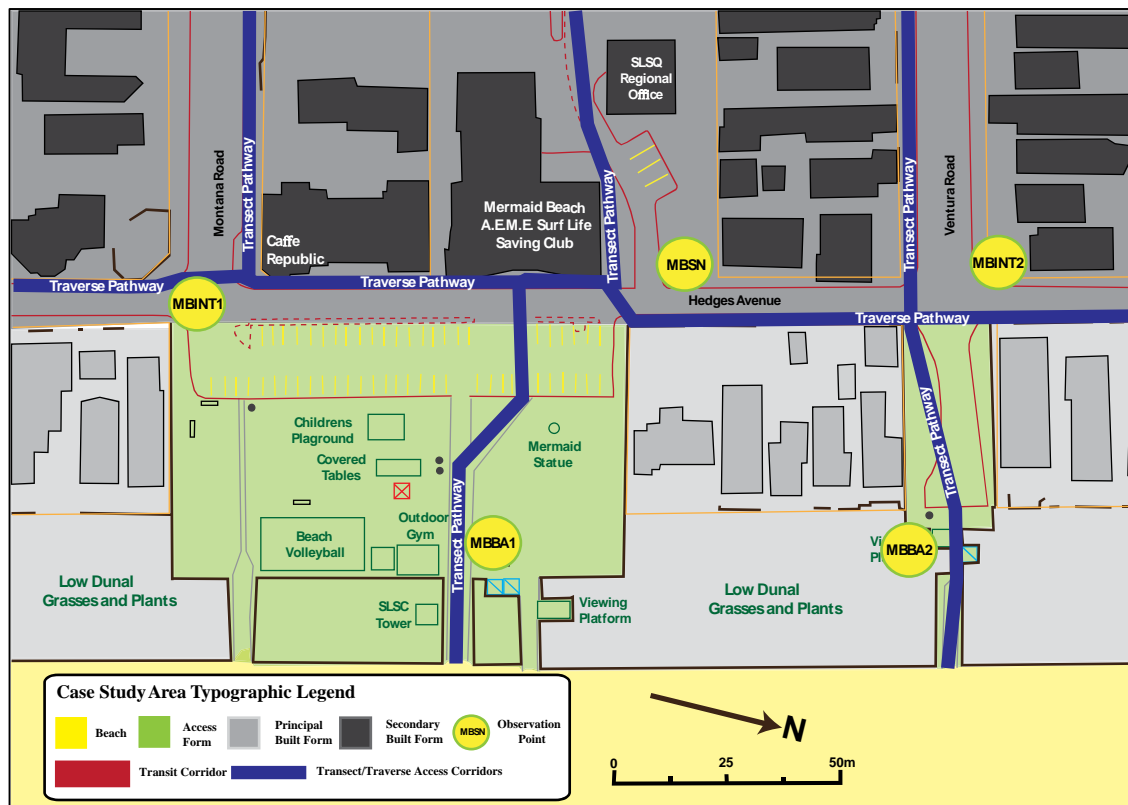


Figure 2.4.6a: The Typographic Attributes of Mermaid Beach Precinct (Author 2012)

Parking in the beach precinct is limited for non-residents and only available along the roads from the highway to Hedges Avenue, stub roads and by the pocket park. On Sundays and Saturdays the SLSC members will often use up much of the available parking from early in the morning. The private properties along the beachfront side of Hedges Avenue have private access to the beach through the publically owned and maintained dunes.

The dunes have been effectively privatised and incorporated into the private realm of the beachfront properties. There are paths leading to the beach from private properties and, in some cases, lawns and gardens extend onto public property throughout the suburb. The low grassed dunal planting is in sharp contrast to the trees and bushes on the public foreshore in Broadbeach. There are also strategically placed plantings in the dunes to maintain views and screen the homes from the viewing platform and public areas (figure 2.4.6b).



Figure 2.4.6b: Private Access to Public Property in Mermaid Beach (Google Earth TM 2008)

When combined with the virtual privatisation of the foreshore dune for visitors, the allocation of the built forms to exclusively private use, with very little commercial function, Mermaid Beach is not supportive of outsider visitation. The allocation of the transitional space of the foreshore to private residents also affects the opportunity to promenade through the beach precinct, as there is no pathway for people along the foredune.

The traverse pathway along Hedges Avenue is physically and visually disconnected from the beach and ocean by private properties and their high walls, except for the occasional stub road beach access. This makes the traverse path an unlikely walking route as visitors to the precinct have little incentive to walk in the beach precinct unless they are residents and destinations outside of the precinct are too far away to comfortably walk to. Visitors who arrive by car are likely to park and stay using either the foreshore pocket park, the café, SLSC building and the beach, as there is little incentive to travel outside of these places.

The southern transect pathway travels from the beach along a fenced path through the dunes to the foreshore pocket park and its small children's playground, BBQ and other outdoor facilities, through the car park to cross Hedges Avenue at a pedestrian crossing, opposite the Mermaid Beach SLSC building. At this point walkers can choose to travel past the Caffè Republic and Montana Road to the Gold Coast Highway or between the SLSC building and the Surf Life Saving Queensland (SLSQ) regional office to Mermaid Park.

The public beach access points in the beach precincts are all managed access. Visitors reach the beach through fenced dunes on soft sand paths that can be steep if an erosion event has occurred. Except for the vehicle shared access path at MBBA1, they are only 1200mm wide (Figure 2.4.6c).



Figure 2.4.6c: The Beach Access Path at Ventura Road Mermaid Beach (Author 2012).

2.4.7 Transitions and Activity in the Beach Precincts

This section analyses the relationship of the transitions between the forms, corridors, locations and edges of the beach precincts of the case study and activity. Although it is true that the allocation and arrangement of spaces and places in any location cannot determine what people will do in, and with, those spaces and places it is also true, as Alexander (1979) remarked: ‘The action and the space are indivisible. The action is supported by this kind of space. The space supports this kind of action. The two form a unit, a pattern of events in space’.

It is not that a particular design of public space creates specific events but there are essential elements in the design of a place that allow and support them. The different patterns of

transitional spaces from built to access to recreational forms are vital elements of the arrangement of the elements of the urban beach typology. It is the transitions from private to public, street to park, foreshore to beach, and the design of those transitions, that unlock the inherent benefits of place so people can use them.

If dunal planting or residential buildings physically occupy and block the most important spaces for accessing the social, recreational and restorational benefits of these vital transitions, those benefits are lost to the public in a beach precinct. If the public and private/commercial transitional edges are not designed to support activities, physiological and psychological needs then people cannot stay to do or enjoy activities that the place potentially allows.

The three different precincts in this study each create various opportunities in the locations for different groups of society to enjoy benefits of place at the transitions. The transition from street to foreshore-park, for example, can support the types and frequencies of activities that take place in the park or an active street. If the transition is a busy road next to the foreshore-park, then people tend to move away from the noise and smells of traffic to occupy a space they feel comfortable with for activities. This can be seen in the Broadbeach northern foreshore-park (Figure 2.4.7a). where the children's playground and other facilities are located over 50m from Old Burleigh Road and few activities were observed to occur along the transitional edges.

Principal Built Form to Access Form Transitions

The lack of private commercial edges along the roads adjacent to the foreshore-park in Broadbeach and Mermaid Beach precincts also reduces the level of activity in the transitional space from street to foreshore-park. The design of Old Burleigh Road with parallel and end-on parking along the park and street and the high walls of the resorts provides no support for people to enjoy viewing the foreshore-park or the activities in it from the street.

If the resort lined edges along Old Burleigh Road were active edges with shops, cafes and restaurants alongside toilet and other supportive facilities available to the public then this would transform the use of the road and the park and increase the opportunities for activities and events. Activities would increase if the road were to be pedestrianised and traffic was either very light or absent, the transitional space from street to park becoming seamless.

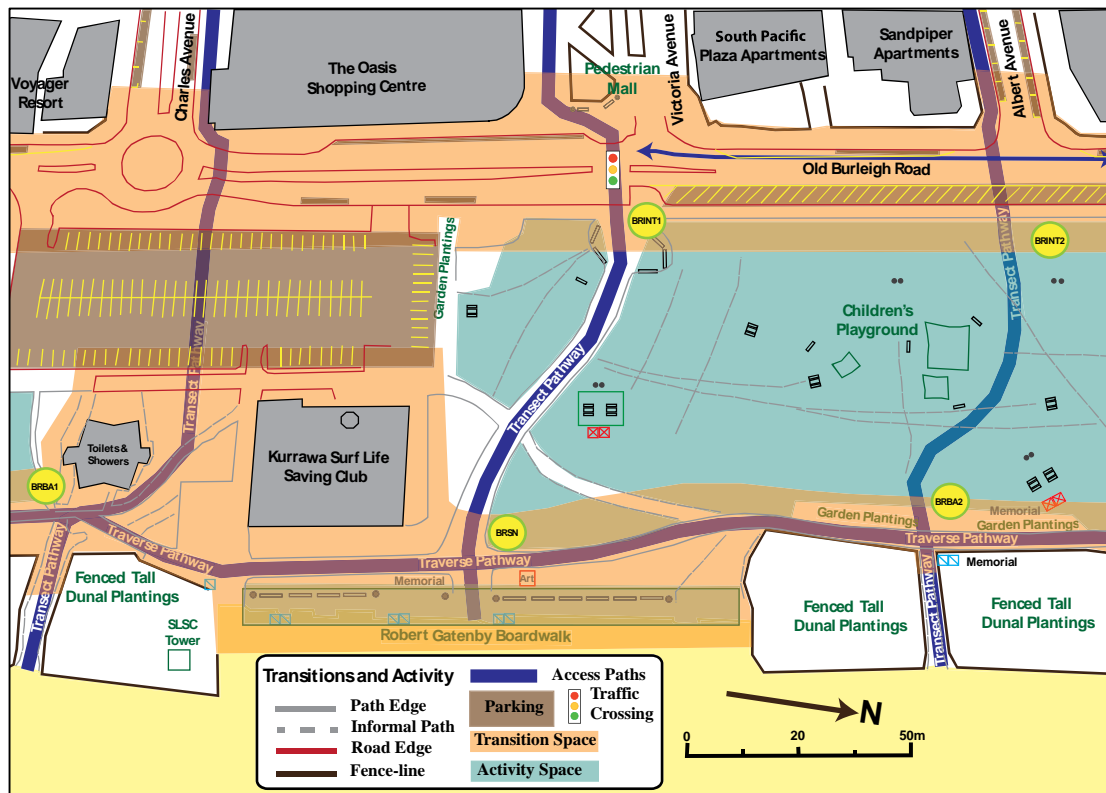


Figure 2.4.7a: The Relationship between Transitional and Activity Spaces in Broadbeach (Author 2012).

In Broadbeach it is the residents of the resort towers who benefit from having a quieter edge to the foreshore-park. They can enjoy views to the park and ocean from the balconies on the higher floors in the apartment towers. The visitor to the foreshore-park is disadvantaged by the lack of active surveillance and the sense of isolation and lack of supportive public infrastructure produced in the parkland especially in the location opposite Albert Avenue.

The spatial arrangement in Burleigh Heads and Mermaid Beach precincts at the street to park transition is different to the situation found in Broadbeach. In Mermaid Beach there is minimal support for extended stay in the foreshore park in the transitional space from street to parkland. The foreshore-park in Mermaid is also relatively small and enclosed by private properties with high walls on two sides.

The street to park transitional arrangement in Mermaid Beach does not support the visiting public unless they are active SLSC members. It actually tends to discourage visitation and deters outsiders who are not self-sufficient as it provides minimal public infrastructure to support extended stays.

The design of the street to building transitions in Hedges Avenue favours cyclists and, to a lesser extent, drivers. However, it actively discourages walkers who are marginalised to small

and poorly navigable spaces. Local residents, who do not need supportive facilities for extended stays, also benefit from the minimal commercial edges of Hedges Avenue because they deter outsider visitation.

Away from the SLSC and Caffè Republic in the Mermaid Beach Precinct and the suburb there is no street to park transition (Figure 2.4.7b). Private residences occupy the space where the foreshore park would be. As there is no public transition from built to access to natural form along most of Hedges Avenue, it becomes an inner city suburban commuter road.

The public to private transition along the road is strictly delineated and reinforced by the high walls surrounding the private residences that are designed to back onto Hedges Avenue with blank building walls and few windows. In some places there are CCTV cameras trained on the street from the private properties making the visitor feel watched and uncomfortable.

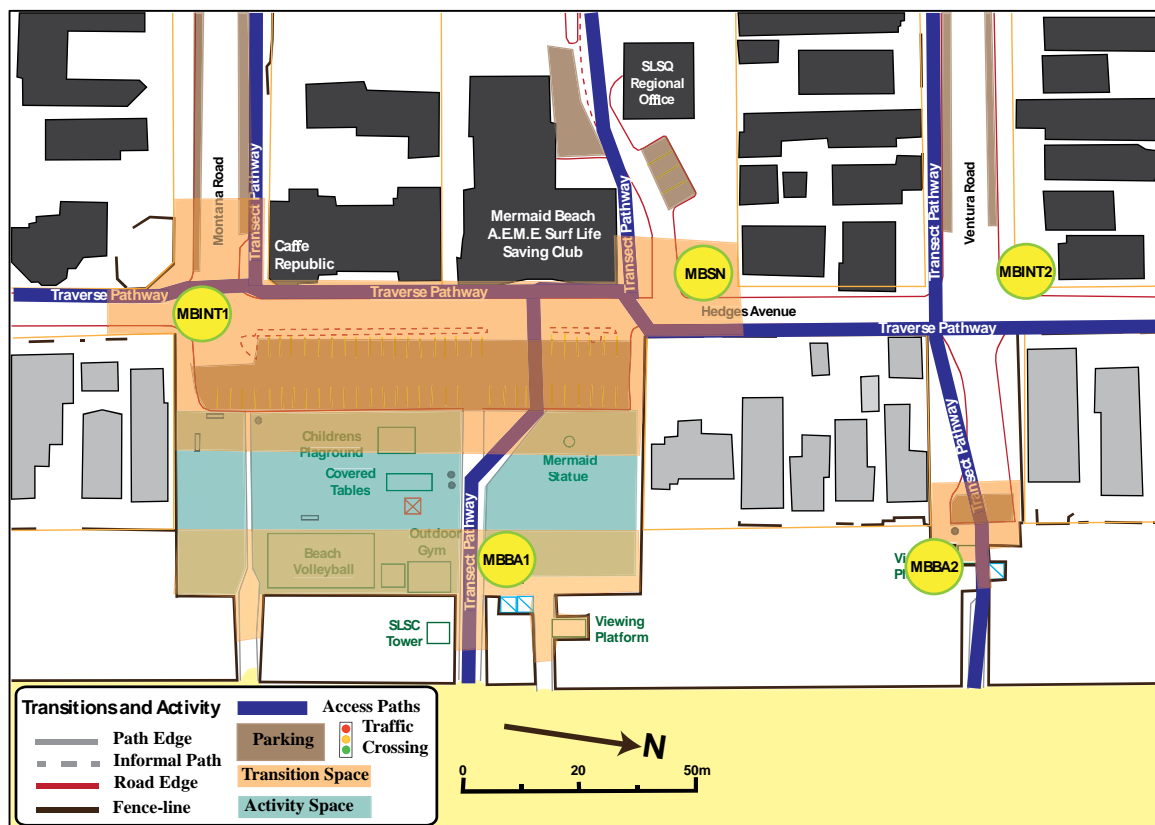


Figure 2.4.7b: The Relationship between Transitional and Activity Spaces in Mermaid Beach (Author 2013)

In Burleigh Heads the design of the transition from street to park is of three types. Goodwin Terrace has light traffic and parking alongside the street to the narrow foreshore-park similar to Old Burleigh Road in Broadbeach. However, the narrowness of the park and the presence of shops, cafes and restaurants along a section of the terrace do create a degree of support for

visitor's to stay in the precinct. The different transitional spaces in this precinct also tend to overlap creating large, complex, transitional areas (Figure 2.4.7c).

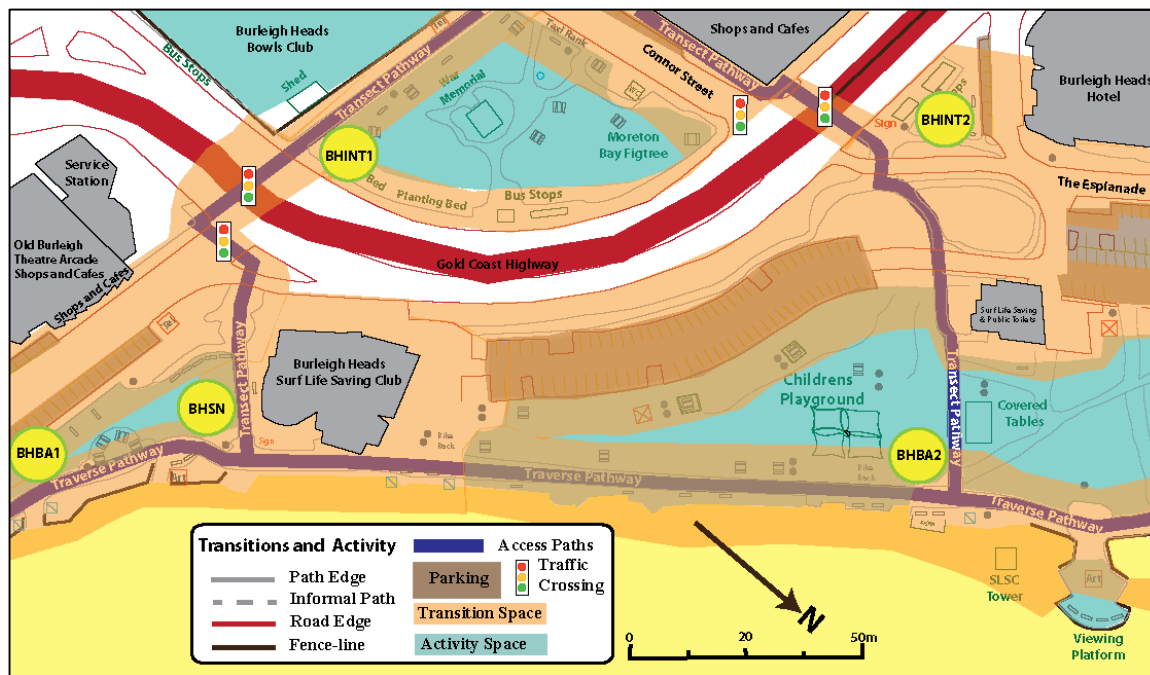


Figure 2.4.7c: The Relationship between Transitional and Activity Spaces in Burleigh Heads (Author 2013)

Views from the Old Burleigh Theatre Arcade across Goodwin Terrace towards the park, beach and ocean are compromised especially when sitting at a table behind traffic and parking. The design of the transition along Goodwin Terrace also favours residents and tourists of the caravan park and resort towers as they benefit from the facilities on Goodwin Terrace and enjoy uninterrupted views along the coast from the upper floors of the towers.

The next type of transition from street to park in the Burleigh Heads beach precinct is along the Gold Coast Highway to foreshore-park edge. The six to eight lane highway is the dominant element of the transitional space from the Memorial Park in the principal built form across the highway, past a large car park to the foreshore-park. In this case, the principal built form is actually parkland, which gives the highway a sense of being between two green open spaces even though traffic is a dominant element of the spatial arrangement.

The Gold Coast Highway transitional edges are largely impermeable and pedestrians are directed away from it to cross the highway at traffic light crossings to Goodwin Terrace and The Esplanade. Drivers and public transport are prioritised in this transitional space.

Pedestrians are tempted to cross the highway to and from the northbound bus stop in the Memorial Park, but there is a high degree of risk with this type of behaviour.

Either side of the Gold Coast Highway the transitional space favours different activities. The Memorial Park edge of the highway has few facilities to support activity and the noise and odours from almost constant traffic deters people from lingering. Seats and bench tables start to appear at around 20m into the park and the shops, offices, cafes and restaurants invite the visitor to move towards Connor Street. There is an active relationship between the Memorial Park and the shops, cafes and restaurants along Connor Street that support stays in the parkland and enhances the visual aspect of the street towards the parkland.

On the foreshore park side of the transitional space, along the Gold Coast highway, the situation is complicated by a special case of transition found in foreshore-parks with SLSC buildings in them. Not only is there a transition from street to foreshore-park at this location, but there is also a transition area between the private club spaces to the foreshore park and the territorialisation of the adjacent foreshore-park by club activities.

The SLSC buildings in foreshore parks have concrete aprons around them for the delivery of goods and as places to deploy, wash and maintain their equipment such as boats, boards and trailers. SLSC buildings are also associated with large public car parks within the foreshore-park, as is found in all three beach precincts in this study. These car parks are naturally favoured by club members who often stay for extended periods especially on weekends when club carnivals take place in the summer season. Club activities also tend to territorialise foreshore park spaces adjacent to the clubs for a variety of events including club barbeques, training and competitions (Surf Life Saving Australia 2013b).

The location of the SLSC buildings and their associated car parks in Burleigh Heads and Broadbeach divide the foreshore parks and reduces the area available as parkland. The car parking associated with the Burleigh Heads SLSC club along the highway, in the foreshore park, also creates a physical barrier to the highway for the people using the foreshore park. This benefits people using the park by screening the highway and reducing the effect of the noise and odours. It also deters people from using the dangerous desire-line crossing of the highway to and from the Memorial Park. This type of transition means that people derive both benefits and costs from the location of the carpark.

The last type of transition from street to park along The Esplanade transitional space is similar to both the previous types. There is some support for extended stay in the adjacent foreshore park along The Esplanade, as is found along Goodwin Terrace from the Burleigh Heads Hotel and cafes. There is also more through traffic from the Gold Coast highway along

The Esplanade, as there are more destinations along it than on Goodwin Terrace. The large transitional space from the principal built form to the foreshore park has routes that conflict traffic with people. The walker has to navigate through parking and traffic routes which obstruct clear pathways to the foreshore park.

Access Form to Beach Transitions

In the Gold Coast beach precincts, the transition from the recreational form of the beach precincts with a foreshore park is either through an open or managed beach access. On the Gold Coast there are also foreshore roads in the access form, with a beachfront path that sometimes has park-like characteristics. These are found all along the Gold Coast City coast in places such as Surfers Paradise and Bilinga. In beach precincts with the principal built form along the foreshore instead, access is through the stub road access found on the Gold Coast. In other places like Malibu the privatised access form may be by a pathway along an easement between buildings or from a cliff top (The Times Editorial Board 2013).

The transitional edge of the access form to the beach in the Broadbeach precinct is from the traverse pathway and either along soft sand pathways, through the fenced dunal plantings, or from the Robert Gatenby Boardwalk. The fenced dunes restrict the visual connection to the beach and ocean but may provide some resistance to beach erosion and shelter from the prevailing weather from the south west for people walking along the traverse path.

The case for dunal plantings to prevent erosion along the Gold Coast would be stronger if the local council were consistent by planting of trees in the dunes in front of homes along the foreshore. Broadbeach was saved from early post war development by rutile sand mining in an area of the coast that appears, as its name indicates, to be more prone to sand deposit rather than erosion (Gold Coast City Council 2013a).

The foreshore dune profile and plantings prevent the Broadbeach precinct maximising its transitional connection to the beach and ocean. Views to the beach and ocean are best from elevated places in the principal built form, and from the upper floor of the Kurrawa Surf Life Saving Club Building. The value of this view is emphasised by the now lapsed proposal from the Jupiters Casino to rebuild the club and reserve a new third floor for the Casino's high rollers, in exchange for financing the rebuild (Arden 2011b). This suggests that a boardwalk through the dunes might maximise the visual connection to the park, beach and ocean in this transitional space.

The Burleigh Heads beach precinct is an example of the benefits of direct visual and physical connection from the foreshore to the beach. For most of the length of the traverse path along the foreshore, people can step directly from the path onto the beach and have uninterrupted views to the beach, ocean and landmarks along the coast, such as Burleigh Heads National Park and the Surfers Paradise skyline.

There are short sections of fencing along the edge of the foreshore to the beach that block views if you are sitting in the adjacent foreshore-park, but, generally, the visual connection is maintained whilst walking along the traverse pathway. The council has also constructed a viewing platform and beach access that allows people to either access the beach and ocean or view activities and scenery along the beach in both directions. This viewing platform also acts much like a short jetty, allowing people to view back into the foreshore-park and principal built form.

The location of the children's playground, near the transitional corridor of the traverse path, favours visitation by families with children who can access a range of activities and facilities in proximity to each other. This spatial arrangement and the nature of the transition from foreshore park to beach allow parents to engage in social and other activities whilst still maintaining a visual connection to their children.

Having conducted a typological analysis of the spatial arrangement and nature of the different forms, pathways and social nodes for residents, tourists and visitors in the case study areas we now move to a short conclusion of this chapter.

2.5 Concluding the Typological Review and Analysis of the Beach Precincts

This chapter has examined and reviewed the literature of the typologies of place that could be used for a typological analysis of the three case study areas. It has also established a contextual background for each of the study areas and applied the urban beach precinct typology to build an understanding of the relationship of the elements of the typology to the uses and activities found in the different beach precincts.

From the review of the literature and the examination of urban beach precincts in the Gold Coast, it was evident that no one typology was suited to a linear beach typology for the purposes and intents of this research. This led to the construction of an urban beach typology by the author that can be used to examine the existing spatial arrangement of the built,

recreational and natural environments along with the activities and land uses of public and private spaces of the urban beach precincts found on the Gold Coast.

The typologies reviewed were in three broad categories: urban and development, coastal spatial transitions, and beach and tourism. The urban and development typologies examined the historical and political relationship of place with purpose of use for activity and movement (Krier 1979). They also illustrated how different types and intensities in the development of place affect social relationships and conflict over the benefits of the beachfront over time (Smith 1990).

The typologies examined also describe the incremental relationship between the natural and built environments and suggest forms for appropriate development that reconcile human and natural habitats (Duany 2002). The Ley de Costas legislation also set out regulation for coastal development to assert the political primacy of public ownership of the beach and control development activity and amenity in a suitable spatial relationship with the coast (Ley de Costas 1988).

The Ley de Costas typology also provided some definition of the different transitional spaces and places from the natural to built environments and can be considered as a coastal transitional typology defining the lateral zones from the sea inland. In doing so, it defined permissions for appropriate development and activity of lateral zones. The Bluespace typology built an understanding of how the interface of the sea and the land can combine to produce ephemeral, transient forms defined by their relationship of adjacency of form and transition between the built and natural environments.

The tourist and beach taxonomies of place described different beach morphologies and the relationship of the form of the beach to anthropogenic activities, development and government of places adjacent to the beach (Williams and Micallef 2009). They also indicated how tourist activity can dominate the design and use of precincts (Hayllar, Griffin and Edwards 2008) and how the descriptive characteristics of place can be aligned to surfing, swimming and other activities that also require particular conditions, amenities and provision of public space for access.

When the typological analysis is combined with an analysis of the urban design attributes of each precinct, it will identify and categorise their spatial and physical relationships. These spatial and physical relationships will be investigated in later chapters, to compare the

empirical evidence of the observed social and movement activities with the reported expectations and preferences of the user and interest groups in the design, planning and governance of the beach precincts. How well each precinct and the identifiable spaces and places within the precinct meet people's purposive use of place will then be revealed.

The typological analysis also indicated that conflict is concentrated in the transitional spaces, locations and edges of the beach precincts. This conflict has been created between residents, tourists and visitors and the different user and activity groups of the beach precinct and can be listed as follows:

- There is a largely uncontested conflict of interest between Surf Life Saving Clubs and the public over control and use of the public domain in beach precincts where the SLSC occupy public spaces that divide and restrict the design of foreshore parks.
- Conflict also exists in the precincts between residents, tourists and visitors who are differently favoured by the design of the transitional spaces along the edges of streets and the foreshore beach transition for activity and facilities and, in particular, views to the beach and ocean.
- There is also a conflict between cyclists, walkers and others with private beachfront property owners over the control of a potential traverse path along the foreshore dune in front of the beachfront properties on public land as well as between cyclists and others along the shared paths of all the precincts.
- There is a conflict between residents, tourist and visitors especially along the street foreshore park transition in Broadbeach and the entire public space of the Mermaid Beach precinct. These can be seen as an insider/outsider conflicts (Hayden 1995).
- There is a conflict between different groups of users for the limited facilities in the foreshore parks when the beach precincts are busy, such as public holidays.
- There would appear to be a conflict between the beachfront property owners and the council over the control, nature and height of plantings in the public dunes between their properties and the beach.

When considering the conflicted allocation of the transitional spaces to favoured uses and activities where public money is being spent, then egalitarian access should be expected, particularly when spending public money benefits specific individuals and groups in society. The Surf Life Saving Clubs, beachfront property owners and cyclists can be seen as favoured by the expenditure of public money to support their interests. Morrell (2009) asserts that one

of the roles of the academic community is to scrutinise the claims those in power make for the expenditure of revenue for the ‘public good’.

There is a lack of research in the academic literature either directly into the validity made for the claims of the Oceanway project or the contributory evidence provided by the active transport movement for the shared path policy. This may be due to the tendency of problem-led research being determined by those in a position of power, the questions asked and the funding provided (Morrell 2008) or the manipulation of scientific investigation for political purposes (Save Our Spit 2013).

The lack of critical analysis of the claims of the Surf Life Saving Clubs to subsidised and favoured status in beach precincts and the demands of beachfront owners to prevent the construction of foreshore paths and provide beach restoration without foredune access is a cause of public access conflicts (McKeon 1970). When public money is being spent, then egalitarian access should be expected. The issue with beachfront properties is that a city with a fixed quantum of beachfront that is so highly valued by residents, visitors and tourists alike has created restricted access to a half of the available beachfront transitional corridor. This places even greater pressure on the three foreshore parks and esplanades of the Gold Coast to meet the needs and preferences of all residents, tourists and visitors.

Having examined the contextual backgrounds and typologies of the three selected beach precincts we now move forward to examine urban design theory and guidelines. Suitable attributes, characteristics and values of the urban design of place will be established in Chapter Three that can explain how people use, understand and access the public space network to fulfil their purposive use of place.

Chapter Three Politics of Place in the Design of the Cultural Landscape

Societies only exist in time and space. The spatial form of a society is, therefore, closely linked to its structure and urban change is intertwined with historical evolution. Manuel Castells 2006.

Having established and defined the typographical attributes and characteristics of the different types of beach precinct found on the Gold Coast, we now need to identify the urban design attributes and characteristics of the different precincts in order to answer the overarching research question of how well the spatial arrangements and urban design attributes in each type of precinct meet different individuals' and groups' needs for their purposive use.

The selection of urban design tools of analysis of the beach precinct will be guided by adopting the urban design values that are rooted in the individual, social, cultural, biophilic and topophilic values of those precincts, to enact preferred behaviours associated with them that are most appropriate to the particular needs of people walking in the public realm of beach precincts (Tibbalds 1992).

If the design of the beach precincts is to meet the needs of all the social and demographic group users of the beach precincts, then the role of good design is to understand and incorporate the most important values held by those users. To achieve this aim, there must be clear and explicit statements of the values which are applied in the design process to decide between the competing political interests of dominant, resistant and project groups in the built environment professions and society as a whole. The design process must identify the winners and losers in the production of public spaces and places for access to public goods, especially when the public goods are as valuable to society as a whole as they are in beach precincts (McGlynn and Murrain 1994).

The research adopts the premise that urban design is a political-cultural process (Hayden 1995) and that politics is the way that society organises the production of the built environment to suit the cultural intent of society's dominant groups (Cuthbert 2007). This chapter is concerned with the functions that are facilitated, and the interests and purposes that are served, in the design of place. However, the human physical and psycho-social dimensions of space and place will also be examined.

This chapter presents a brief review of the literature on the cultural politics of the creation of place that are embedded in the foundations of the practices of urban design and planning. It will also review urban design theory as a cultural construct, to understand the values that are preferable for the design of place and allow the selection of urban design principles that have attributes which meet the intent of the research.

The investigation into the cultural construct will create an understanding of how particular urban design guidelines originate in political positions that support the dominant development practices of their time. The research will also examine the literature of the human dimensions and relationships of place and people, so that appropriate physical and psycho-social dimensions and measures of place can be included in the analysis of the urban design analysis of the precincts.

Culture is described by Mitchell (2000) as encompassing language, dress, food, habits, music, housing styles, religion, family structures, and most importantly 'values'. Culture can also be seen as concerned with the 'symbolic' artefacts, including the built environment produced as a result of the 'material' relations of politics, economic and society (Williams 1976).

Culture is also understood as both a way of encompassing ideas, practices, institutions and structures of power and a whole range of cultural practices: artistic forms, texts, canons, architecture and mass-produced commodities (Nelson, Treichler and Grosberg 1992). The cultural artefact of the beach precinct, which draws from the values of both the natural and built environment, is the focus for analysis in this research. The beach precinct reflects the embedded cultural values found in its spatial arrangement, provisions of public infrastructure and the design of the public realm (Lefebvre 1971).

Seamon and Sowers (2008), when reviewing Relph's influential book 'Place and Placelessness' (1996) and its contribution to phenomenological research methodology, identify the ability of the method to examine and clarify the taken-for-granted nature of place. They argue that Relph's concept of space and place allows for an experientially-based understanding of countless types and varying intensities of direct and abstract engagement with different spaces. This reveals the different types of relationships of people with places as an indivisible whole in which places are experienced in varied dimensions by different individuals and groups over time.

Relph saw the study of place as intrinsic to the creation of new places and the conservation of existing ones (Relph 1981, 1993). Without an understanding of the identity of a place there would be no way to differentiate one place from another (Relph 1976). This is an observation which has a certain resonance when confronted with the endless sameness of development in places like Mermaid Beach. The components that create the identity of place for Relph (1976) are almost identical to the framework of purposive model of place (Canter 1983) which guides the research in this thesis (section 1.7). These are the 'place's physical setting; its activities, situations, and events; and the individual and group meanings created through people's experiences and intentions in regard to that place' (Relph 1976).

There are diverse political-cultural normative narratives about space and particularly place, such as place and placelessness (Relph 1976) sense of place and place-identity (Carter, Dyer and Sharma 2007), place branding (Johansson 2012), sacred space (Tuan 1974), gendered space (Flores 2014), race and space (Gulson 2006), market space (Carmona *et al.* 2003), green space (Beatley 2010), healing space (Donovan 2013), play space (Stevens 2007), commoditised space (Sorkin and Peters 1993) and even the end of public space (Mitchell 1995).

The often used terms of 'place-identity' and 'sense of place' are seen by Carter, Dyer and Sharma (2007) as the 'view from the bottom' and the 'view from the top' respectively. In their study of the sense of place and place-identity on the Queensland Sunshine Coast they suggest that 'place-identity' is created by the global forces of development and is part of a forced narrative associated with the marketing of themed development and lifestyle products of corporations and governments (Mullins 1990). A 'sense of place' is said to be more important to rural and long-term residents who have experienced the various dimensions of living in a space over time.

The concept of the public spaces of the city as a theme park has a natural attraction to the dominant groups who influence the governance of the Gold Coast, a city largely created by the influence of mass tourism (Mullins 1990, 1991). The postmodern concept of public space is associated with consumption, commerce and social surveillance as part of the characteristics of a globalised neo-liberal project (Sassen 2005). The design of public parks that are based on the values of the public space as an extension and adaptation of the corporate and municipal realm (Sorkin and Peters 1993) was perceived by Madden (2010) as not heralding the end of public space but representing 'publicity without democracy'.

The notions of conceptual frameworks for understanding the cultural landscape can be seen as socially constructed narratives. These narratives are used in the political struggle for the control of the spatial land use and the allocation to preferred activities of the public and private realms of urban development. They are used as arguments to support the public and private discourses that place the exercise of power at the core of the cultural creation of new and existing places. They create the narratives for the agendas, projects and policies that the governance decisions make about public space and its permitted uses and activities on the Gold Coast and elsewhere (Flyvbjerg 2002) as well as the concept of the public space itself.

All these narratives create layers of different meanings for the same place for those groups and individuals who simultaneously use and contest them. These different identities of space and place are all founded on the role and identity of the uses and activities that public space can provide for different individuals and groups. It is not possible to survey the beach precincts from the perspective of all these narratives. However, in the next section we will examine how the power relationships surrounding the politics of governance of use and activity can be examined through the prism of the role and identity of those individuals and groups (Flyvbjerg 2006).

3.0.1 The Role of Identity in the Design of the Cultural Landscape

For the purposes of this research, the groups in society who may play a role in the cultural construction of the urban design of beach precincts include the demographic groups of age and gender, or the membership of one of the many cultural identities that people construct as a source of personal meaning. People's identities are enmeshed with their political and cultural positions. An individual can simultaneously have many identities and may be an actor, member or supporter of different groups that politically represent them. This can arise for example, from being a mother, daughter and sister, businesswomen, feminist, rotary, sports and social club member, voter, surfer and conservationist, to name just a few of the identities created by roles, preferences, activity and experiences.

It is not practical in this thesis to describe or define all the different identity groups in society who may have or will influence the design of beach precincts. However, it is possible to distinguish some of the roles that institutional, organisational and special interest user groups may have had in the contest for the control of the public spaces of the beach precincts. These

user groups include what Castells (2009) characterised as legitimate, resistance and project identities. In this analysis of the way different groups contest the design of spaces to meet their perception of appropriate uses of place, the groups have been recast as dominant, project, resistance and passive identities (Althusser 1984)(figure 3.0.1).

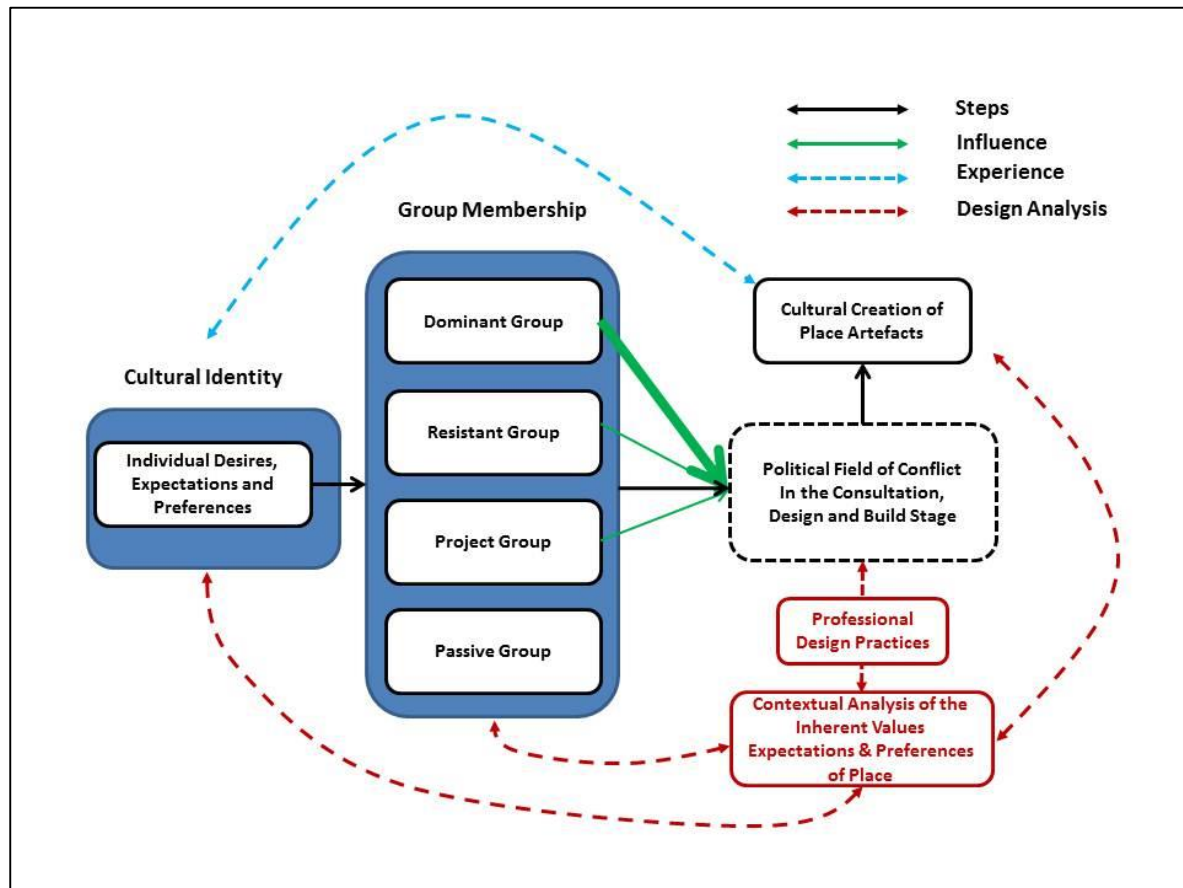


Figure 3.0.1: The Role of Identity in the Political Creation of Place (Author 2012)

The factors which influence individuals becoming involved in the political process include their personal skills, education, opportunity, personality traits and inclinations. However, in the creation of space, the influence the different types of identity groups have in the political conflict can be described by the attributes of the group or groups they belong to.

It is possible to be member of more than one identity group and act in more than one role, largely as a result of the different political positions that any individual may possess (Giddens 1991). The level of engagement in the political fields of conflict over the consultation, design, building and governance of the cultural creation of place artefacts can be described by understanding the roles of the different identity groups and their attributes. These have been categorised for this research as follows:

Dominant Groups

Dominant groups have particular attributes. They are empowered by their level of engagement in the political fields of conflict with their ability to control agendas and make decisions. They either have personal wealth, or control of government or corporate expenditure. They often possess global political and economic connections and exercise personal, institutional, legal and historically legitimised powers (Castells 2012).

The dominant group members initiate the vast majority of change to the built and natural environments and have the greatest degree of influence in the political field of conflict over the consultation, design, build, or governance of artefacts in that built environment (McGlynn 1993). The dominant group members set the development agenda and create the processes that regulate those developments, including the nature of the consultation process, usually making the final decisions about development.

The individual needs and preferences of the dominant group are always articulated and prioritised in the political field of conflict. Their cultural identity is reinforced by the production of the cultural creation of place artefacts and they receive positive endorsement of their desires and expectations by their control of the process (Castells 2009). On the Gold Coast, these dominant groups are represented by the political parties, media, tourism, development and construction industries, and the powerful individuals with global connections who live in the city. There are also dominant institutional identities including councillors, bureaucrats, state officials and politicians.

The relationship of dominant, project, resistance and passivity in the production of the physical components of the built environment has been investigated by McGlynn (1993) and represented as a matrix of power (Table 3.0.1). This matrix categorises the actors, suppliers, producers, and users of the urban space by their degree of legislative or contractual responsibility or influence, and their ability to initiate or control the design and construction of elements of the built environment.

The everyday user is shown as having influence by participation (resistant identities) or no obvious interest (passive identity) roles. The assignation of landowner, funder, planners and engineers, architects, developer as dominant identities contrasts with the influence by argument-only assignation of the urban designer and everyday users.

Table 3.0.1: A 'powergram' for urban design (McGlynn 1993)

Actors Elements of the built environment	Suppliers		Producers					Consumers
	Land owner	Funder	Developer	Local authority		Architects	Urban designers	Everyday users
				Planners	Highway engineers			
Street pattern	–	–	○	○	●	–	○	○
Blocks	–	–	–	–	–	–	○	–
Plots – subdivision & amalgamation	●	●	●	○ (in U.K.)	–	–	○	–
Land/building use	●	●	●	●	⊕	○	○	○
Building form – height/mass	–	●	●	●	–	⊕	○	○
– orientation to public space	–	–	○	⊕	–	–	○	○
– elevations	–	○	○	●	–	⊕	○	○
– elements of construction (details/materials)	–	○	●	⊕	–	⊕	○	○

Key: ● Power—either to initiate or control. ○ Interest/influence—by argument or participation only
⊕ Responsibility—legislative or contractual – No obvious interest

The 'powergram' explains the roles of most of the actors in the production of place, but not the process of production. It does not, for example, explain that developers, planners, engineers and architects often take two or more roles in the process; or the influence of political actors in different layers and departments of government. Environmentalists, journalists, lawyers, public health professionals, real estate and other commentators are also influential in the process politically.

The viewpoints of the dominant groups in society are usually codified into the design, planning and development of the built environment by different government bodies which politically align with the paradigm of values in those codes. This is usually achieved in close consultation with the existing local professional bodies, such as the Australian Institute of Architects (AIA), and development lobbies, like the Urban Development Institute of Australia (UDIA) and the Property Council of Australia (PCA), that all have active local lobby groups in cities and regional towns throughout Australia.

The political process is also influenced by different groups organised around political positions on the built environment that originate in multiple identities of common interest. In this thesis they are referred to as project groups.

Resistance Groups

The Resistance Group is empowered initially by their local connections and sometimes by membership of national or global resistance groups. They usually react to developments created by the dominant group and may be alienated by those developments as they fail to meet their individual desires, expectations and preferences of place design. The creation of places with particular physical or spatial attributes may also exclude them or prevent them from easily accessing places to actuate their needs and desires.

The resistance groups do not initiate change to the natural and built environments as often as the dominant groups. However, through their engagement in the field of political conflict, they may succeed in becoming the dominant group or alter the paradigms and processes of development (Castells 2010). The resistance identities in the beach can be found amongst the environmental and alternative communities of interest.

How well resistance groups represent and organise their resistance will determine the degree of influence they have over the cultural creation of place. The resistance groups have formal and informal forms of resistance and may not participate directly in the community consultation processes created by the dominant group. Instead, they may operate outside of the legal framework. They often act and organise through informal networks, public protests or they may seek to occupy, damage or deface the cultural artefacts of place (Castells 2010). Resistance groups can also be found in academic and governance circles of local, state and federal government.

The resistance groups' effectiveness is determined by their individual and group characteristics such as strength of desires, sense of entitlement and motivation along with other diverse factors. They are self-empowered by their cultural identity and connected to others who share characteristics of that cultural identity. On the Gold Coast, the visible resistance groups are oriented around active transport, surfing, environmental and other cultural issues.

Project Groups

The Project Group usually coalesces as single or special interest groups and can originate from either the dominant or resistance groups. They share the characteristics of their parent group in relation to the control of wealth, corporate powers or positions of authority in different levels and departments of government. They are also as connected and empowered

as their parent group. The degree of influence they exercise over the political field of conflict and the cultural creation of artefacts will tend to reflect the influence of the parent group.

They may, by virtue of their function or position within institutions or corporations, exercise undue influence over the agenda and processes of consultation, design, construction or governance for their desired cultural creation of place artefacts. Their cultural identity drives the form that the project identity will take and they may modify, recreate or abandon their project over time depending on the experiences they have in execution of the project.

The project groups are self-empowered by their membership of the parent groups, the experience of the political field of conflict and the culturally created place artefacts. On the Gold Coast, these project groups include the beachfront property owners; political and economic alliances for the creation of projects such as the cruise ship terminal; environmental groups, such as the Save the Spit group; activity groups, such as the cyclist lobby behind the creation of the Oceanway concept, and other activity groups like the surf lifesaving clubs.

Passive Groups

The Passive Group is characterised by being disconnected from the political field of conflict for the cultural creation of place artefacts. They may lack wealth, organisation, motivation, inclination, education and understanding of the political processes. However, all the other groups will at some time claim to speak for them as they are the largest group of the analysis. They are largely under-represented in the political process and have little in the way of connections excepting their social groups or communities of interests. All the other groups seek to influence this group purely for their electoral power and the legitimacy that brings them.

The passive group can share individual desires or preferences with the other groups and may be motivated to participate in the community consultation process although they rarely get involved in developments other than in their immediate locality. They may be hired for completion of the build stage and this is often used by the dominant group to gather political capital for their projects. The political use of short term job creation in the field of conflict is often used to create support for the dominant groups' projects and allow them to bypass development controls and charges (Smart 2010, Ironside 2012).

The post-modern generation of urban design and planning guidelines, policies and programs largely rely on political constructs of what is good for society, but inevitably reflect the views

of the dominant political philosophy of the time (Castells 2006). For example, the boundaries between private and public property can be perceived differently, depending on the perspective that any particular jurisdiction holds on the rights of private property owners to exclusive use and enjoyment of privacy. The 'right to roam' across private land to access natural environments is encoded in Scandinavia (The Finnish Ministry of the Environment 2007) and is modified in the United Kingdom to a more limited 'right of way' across private land for ramblers (The Parliament of the United Kingdom of Great Britain and Northern Ireland 2000).

3.1 The Cultural Politics of the Creation of Place

Throughout human history the spatial arrangement and relationships of human settlements have been created by socio-cultural constructs. The settlement has been oriented towards the resource being exploited and the functions that were valued in a settlement. It was however, the cultural values of the time which determined the places of significance in the settlement. Urban design and planning, as a socio-cultural practice, predates even the Greeks or Romans although Hippodamus (5th Century B.C.) is attributed as the inventor of the grid urban layout and is referred to as the 'father of city planning' by Aristotle (Jowett 1984).

This ordering of space by the cultural values associated with it can be seen in the contrast between the Roman and Greek political-cultural values. The Romans favoured the pavement, aqueduct, sewers, amphitheatres, forum and baths as essential cultural elements of their settlements. The Greeks, in contrast were more focused on the beauty of their temples. The homes of the poor jostled with the wealthy in a Greek city; in a Roman city the poor were crowded into the tenements of the *Insulae*, in a separated part of the town or city. The loose shape of the agora also contrasted to the regular patterns of the forum. The Greeks centred and elevated their temples. The Romans put the marketplace or forum at the centre and lined its edges with the basilica, temple, baths and amphitheatre (Mumford 1961).

The spatial arrangement and urban attributes and characteristics of Roman *colonia* are clearly an expression of Roman imperial power and political control. Roman citizens could understand the layout and location of all the important facilities and amenities of any *colonia* they visited in any part of the empire. The co-location of the market, forum, temples, public baths and *curia* facilitated and articulated the business of the *colonia* for trade, public health, cultural practices, governance and taxation (Haverfield 1913).

Settlements tend to be limited by the size of the resource which supports the economic activity of the population; by the nature of the geomorphology and technologies for movement; and by the buildings, spatial arrangement and layout of the settlement for the exploitation of the resource that existed at the time of settlement (Mumford 1961). The process of settlement can be seen as a problem-solving design process with the constraints and opportunities of the particular context creating the adopted solution. The cultural values of the present and recent users are those that instruct the design of Gold Coast beach precincts.

In the case of the Gold Coast, the design values exist because of the implicit and explicit decision-making processes that have contributed to the creation of the Gold Coast beach precincts. These decisions took place in the context of a cultural and political contest for the benefits of the beachfront, dominated by the representatives of the development industry and their political proxies with the assistance of a bureaucracy imbued with the intent to facilitate and encourage economic development (Haverfield 1913).

Although the history of the development of the Gold Coast is of intrinsic value, it is not an implicit aim of this research. Rather, the results of the decisions made in the past are evident to the observer by examination of the location, spatial layout, arrangement and relationships of public and private spaces. The orientation of those spaces to the beach has created the degree and nature of public access to the beach, and the nature of the permitted land uses and buildings has framed the public spaces of the beach precincts as a result of past development decisions.

The design of the public space network has changed as the relationships of the dominant local, national or global political structures have changed. This is reflected in the terminology used to describe the design of public space. Before the 1950s this was often referred to as ‘civic design’ but it is currently termed as ‘urban design’ to reflect the change from national to global capitalism (Cuthbert 2007). There are many reasons for the disputation of what is and what isn’t urban design, and these arise from various sources and viewpoints. It is probable that this will remain the case, as public space is such an intrinsically contested space economically, politically, socially, culturally and professionally.

It can further be seen that, as a socio-cultural practice, urban design is not reliant on theory in the same way as professions that rely on the natural sciences are reliant in the production of their professional practices. Indeed, to be reactive to socio-cultural change, it is probably

essential that urban design theories, guidelines, policies and projects continue to evolve politically so as to translate the changes in the society's values into physical forms.

3.1.1 The Cultural Politics of Urban Design and Planning

The differing political philosophies of urban design writers are often concerned with proposals for a better way for people to live and organise their public and private spaces. Urban design and planning theories are not produced by individuals in isolation but as a result of an ongoing narrative of particular political, social and cultural paradigms and histories. However, individuals, groups and communities often interpret and propose preferred forms of development that arise from these paradigms.

The urban design guidelines, policies and plans have attributes and values that vary with the philosophy and politics of their creators. However, as they concern themselves with the production of public and private space, they often have attributes of the built environment that they analyse and use in common, such as the separation of public and private space. It is in the values they bring to the analysis that the different writers and schools of urban design often differ in their urban design prescriptions.

Urban design guidelines are often presented as if they were apolitical, sometimes in an assumed intent to appear unaligned, rational or impartial. However, it is demonstrable that they always have some form of political intent in their formation. For many authors they are the dreams of a better world articulated in print and plans, such as designing for nature (Farr 2008) spatial political economy (Cuthbert 2005) or ending sprawl development (Calthorpe 2001).

The political positions and cultural identities of the urban design guideline authors are discernible by textual analysis. Those authors driven by a vision of an ideal world are more easily politically recognised (Nelessen 1994) than those who pragmatically propose guidelines founded in professional and institutional practice (Hopkins 2001). The former are often the progenitors of utopian plans and designs that seek to replace the existing built forms and the latter are usually those who would prefer retrofitting or modifying the existing.

It is interesting that the people who often influence the field of urban design are not necessarily practicing professionals. Ebenezer Howard (1902) worked as a court reporter when he was in the United States and Jane Jacobs (1961) was a journalist. However, if the

field of urban design is seen as a socio-cultural construct of its time and place, it is easier to understand the role of non-professionals as representatives of contemporary values.

Largely as a reaction to development in particular places in the United States, many of the key urban design writers that influence the post-modern understanding of urban design composed critiques of urban design practices from a social and anthropocentric perspective. Examples include Jane Jacobs' (1961) response to living in New York, and Kevin Lynch's (1960) analysis of the urban form of Boston. Other writers responded to the observed movement inefficiencies of modernist development (Calthorpe 2001) or the spatial form of modernist cities (Marshall 2005, Krier 2006).

According to Fishman (1982), Ebenezer Howard, Frank Lloyd Wright and Le Corbusier were motivated by their dreams of creating a better world to produce designs and plans that were effectively political manifestos intended to solve the urban crises of their times. These foundational thinkers of modern urban design and planning were moulded by their experiences, identity, nationality and political beliefs to seek the transformation of the physical environment in order to transform society. They each saw their plans as a rejection of gradual improvement of the existing cities and called for the abandonment or rebuilding of an urban form they regarded as a failure and a cause of social harm.

Where the three visionaries differed was not in their intent for a better future, but how the reshaping of cities should reflect political objectives of ordering society. Howard (1902) was a cooperative socialist who saw urban planning as the route to a cooperative commonwealth. Wright was a spokesperson for the American decentrist movement and a Jeffersonian Democrat (Wright and Twombly 2009); and Le Corbusier's first designs were initially published in revolutionary syndicalist journals (Curtis 1986). Each produced visions for society based on their political orientation and in opposition to the urban design and spatial organisation of existing city structures of their time. Wright, for instance, believed that everyone was entitled to as much land as they could use.

Frank Lloyd Wright proposed a city of individually owned homesteads connected by highways that would allow people to work part-time on the land and in small factories and shops. This spatial organisation articulated a belief that land use and ownership would allow everyone to reach their potential and to live as they chose on their own land. Wright wanted the United States to become a land where there were no large cities, where everyone lived in

homesteads that covered the entire country in a sprawling planned city he called Broadacre City (Wright 1955, digitised 2006) (Figure 3.1.2a).

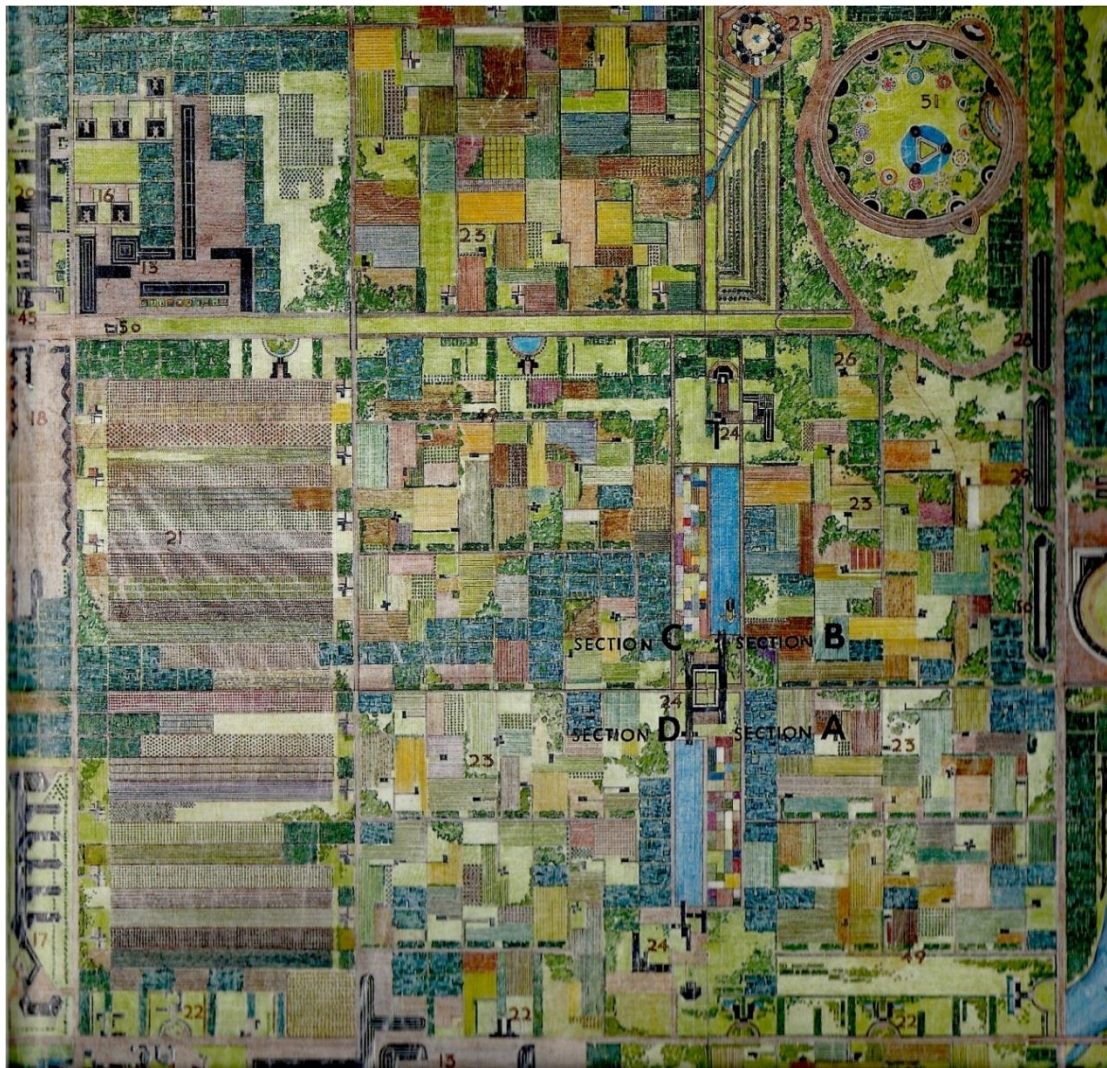


Figure 3.1.1a: Frank Lloyd Wright, *Broadacre City Plan*. (Bruce 2011)

Wright saw the dispersion of people, wealth and power across the United States as a way to prevent domination by the elite (Bruce 2011). This individualist tendency is still an important trend in western political discourse and finds form in the Australian version of the ‘American Dream’ with the single home on a quarter acre block or the rural ‘acreage’ blocks of the Gold Coast Hinterland. The concept of a city without a traditional centre is also proposed by Newman and Jennings (2008) as one of two possible options for sustainable development as both compact and dense urban development, clearly separated from the rural or dispersed development, blended with the rural.

The spaciousness of Wright’s city is only possible because of the private automobile. Dispersion allows independence and connects people to the land whilst allowing them to

grow their own food. However, it also disconnects people and makes them reliant on a personal vehicle. The dispersed model can also be seen as poor at facilitating social interaction and may act against democratic processes as much as it allows for individualism.

Ebenezer Howard's (1902) Garden City has a degree of compactness and a walkable scale that Broadacre city inherently could not have (figure 3.1.2b). This spatial design proposal can be seen as a product of the railway and canal age in which he lived and arises from the nodal development around the railway stations and lines in 19th Century Britain.

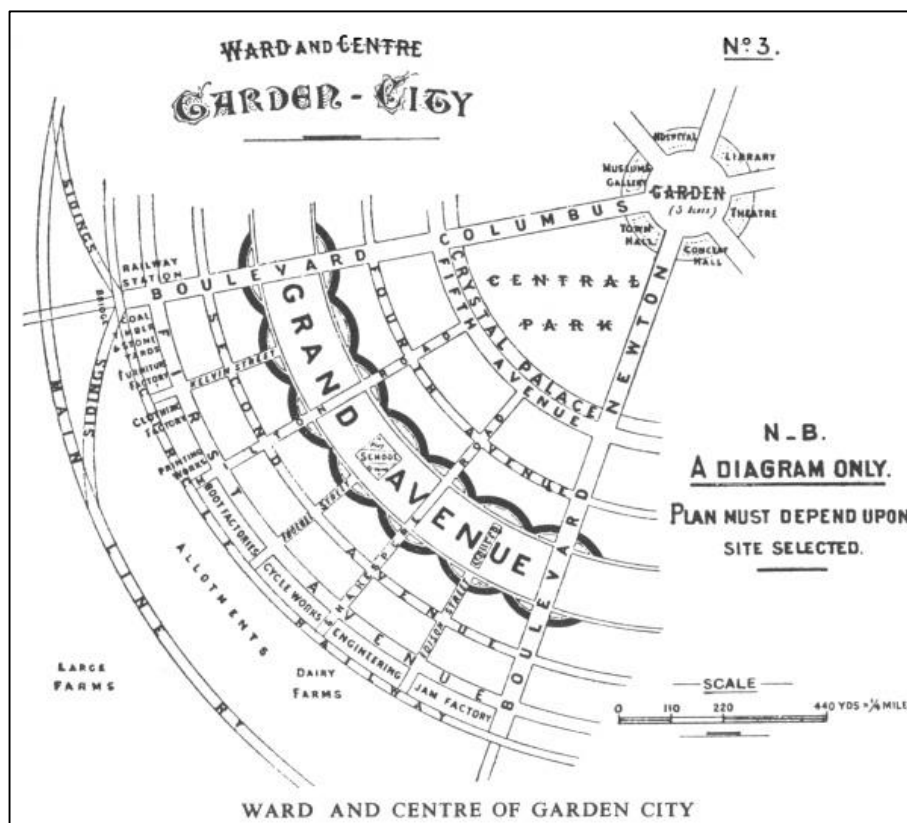


Figure 3.1.1b: Ward and Centre of the Garden City (Howard 1902)

Howard (1902) is explicit about the desirable qualities of development that combined the benefits of the town and the country in his Garden City model. Homes are a five minute walk from work, parks, rapid transit and municipal facilities. People would live in quiet neighbourhoods in attractive homes with pleasant gardens, and enjoy pure air and water. There would be no air or water borne pollution because of publicly maintained infrastructure.

Le Corbusier differed from Wright in that he sought to create plans that would facilitate cooperation within a society hierarchically ordered in a spatial and physical form. Le Corbusier's plans are characterised by the symbolic use of geometric order in his designs and

plans. This reflected his belief in planning over anarchy, and social order over social discord (Le Corbusier and Etchells 1987).

The design of the plans produced by these foundational authors of urban design and planning were intended to create a better world for all. Their personal identities and experiences created the motivation for plans which were intended to change the urban design of new future settlements, focused on their cultural, economic, environmental and political preferences.

It is instructive that some of their ideas were adopted or adapted and some were not. Some of their concerns are enduring; others have faded or changed with time. The design focus and practices of these foundational thinkers in modern urban design and planning indicate that if the political focus changes, the design focus and practices will follow.

They also illustrate that human knowledge, generally, is irreducibly hypothetical, and that urban designs are generated by the imagination in order to solve problems that have arisen in specific historical-cultural settings. This indicates there cannot be a 'one size fits all' global solution to local and contemporary urban design and planning problems within different physical, geographical and cultural contexts.

3.2 Urban Design Guidelines as Practical Theory

Urban design guidelines were identified by Holden (1996) as effectively constituting urban design theory. Urban planners, in their role as de facto urban designers in the development approval process, were identified as having great difficulty in interpreting urban design guidelines. This was attributed to poor understanding of urban design amongst planners caused by deficits in planning education and the difficulty in interpreting the guidelines when they are applied to development applications (Holden 1996).

It may also be that the orientation of the work that planners do towards economic values, transport and two dimensional planning creates cognitive difficulty in interpreting many of the guidelines created largely by the architecture profession in the visual-artistic tradition. Architects and planners do not tend to produce urban design guidelines that are oriented to the social-usage of the public space network specifically for people who walk (Jarvis 1980).

The lack of a stable theoretical foundation of the field of urban design can be seen as problematic for people wishing to apply urban design theories. Cuthbert (2007) observes that

anyone can claim to be an urban designer and that planners and architects have colonised the field from their own varied perspectives. Cuthbert (2007) argues that urban design suffers from this professional contest in that it has become eclectic with no roots of its own, and is easily subject to politicisation as a result.

The field of urban design indisputably exists, but its legitimate field of concern and its theoretical foundations are not easily defined except by the practice of its physical and intellectual creations (Cuthbert 2003). As such, the urban design paradigm has and is likely to be continually revised to reflect changes in the contributing fields and the political and cultural environment as it has been throughout history. Cuthbert (2007) proposed a theoretical basis of urban design based on a spatial political economy located in urban social theory, human geography and cultural studies. Cuthbert identifies four major perspectives of the defining socio-political paradigm of the postmodern period of globalisation.

These four perspectives are identified in the literature as: the historical (Gibson-Graham 1996; Arrighi 1997; Rist 1997; Biel 2000; Hardt and Negri 2000), the economic (Wallerstein 1979; Sassen 1991; Fagan and Webber 1994; Soros 1998) the cultural (King 1984; Featherstone 1993; Urry 1995; Appadurai 1996) and the urban (Zukin 1988; Castells 1989; Ellin 1996; Kotkin 2000; Soja 2000; Smith 2001). The perspectives of most interest to the research are historical, cultural and urban as they best fit the intent of the research questions.

The physical features of a place, particularly the desirable physical and spatial form of the public realm for social usage, are the particular concern of the theories and practices of some urban design writers (Carr *et al.* 1992a; Jacobs 1961; Gehl 2006; Jarvis 1980; Tibbalds 1992). This research will utilise selected principles of urban design within the guidelines that resolve tendencies for conflict between different people's use of place and the physical form of the spaces and places of the public realm (Alexander *et al.* 1977).

In selecting and analysing the prominent and influential Australian and English-speaking urban design guidelines for the research, it was necessary to identify and extract attributes and characteristics of the urban design principles appropriate to the way people value, use and relate to urban beach precincts, rather than globalised and general urban contexts.

The urban design guidelines examined were all intended for general urban forms in different places, and intended outcomes for development. The analysis of these guidelines allowed tools to be developed to understand how the urban design of place gives different individuals

and groups the opportunity to meet their needs, desires, expectations and preferences for the functional use of the unique and inherent values of beach precincts.

In using these general urban design guidelines and selecting urban principles for beach precinct analysis, there was a degree of dissonance between the aims of the guidelines and the intents of the research. This is thought to arise from several factors that include the definitions of the formal language of the field which is in conflict with the common usage of some terms. For example, 'sustainability' has not only been re-interpreted and defined in professional practice (Queensland Government 2008b), but has also suffered from a degree of overuse and exploitation in marketing literature for development (CBD Robina 2009).

It is thought that much of the confusion that exists in the interpretation and understanding of urban design guidelines is inherent in their authors' motivation and political intent, as explained in sections 3.1/3.1.1. Urban design guidelines are also applied to the urban design analysis of places to which they were not initially oriented, to types of places for which they were not intended, or for problems they were not designed to address (Madanipour 2003). We now move towards selecting the urban design attributes that best fit the intent of the research for the examination of the connections between people, place, use and activity.

3.2.1 Analysis of Selected Urban Design Guidelines

Urban design guidelines from Australian and overseas sources were examined to identify, isolate and simplify prominent, commonly agreed, desirable urban properties and generate a set of urban design principles for the research that were most applicable to the analysis of the walking environment of beach precincts.

Some consideration was initially given to adopting one of the identified urban design guidelines to the urban design analysis of the beach precincts in the research. However, no single urban design guideline matched the intent and purpose of the research for the particular context of the analysis of beach precinct design. None of them explicitly focused on the design of the public space network, connecting and facilitating peoples preferred use and activity in the transitional space between urban and natural environments.

The urban design guidelines examined were produced with implicit knowledge of the international literature of urban design. In particular, these included the global healthy cities movement (Giles-Corti *et al.* 2008), the tradition of incremental social improvement and economic progress in town planning from the United Kingdom (Evans *et al.* 2007) and the

urban structural approach of influential American architects, developers and planners (Congress for the New Urbanism 1996, U.S. Green Building Council 2010) as well as the bi-cultural response of New Zealand to urban design and renewal (Pirrit *et al.* 2005).

The political, cultural and professional influences on the urban design guidelines can also be inferred from an examination of the citations used in the guidelines. All the guidelines examined include an articulated focus to redress or change development outcomes that they identify and oppose. The authoring group's focus for the guidelines is then the organising factor for a manifesto of change to achieve their goals. In all the guidelines that were examined, the intended process of change to the urban design of future development is evolutionary and adaptive; although the New Urbanist manifesto clearly wishes to replace the existing American form of car dependent development as well as the contemporary regional planning paradigm.

The authors, policies and institutions referred to in the references can also be examined to identify their locational origin, professional identity, adversarial focus, and intended goals in each of the different urban design guidelines selected for analysis. The political and cultural identity of guidelines can also be inferred from the composition of the individuals, groups and associations who wrote and supported the generation, publication and diffusion of the guidelines.

The Australian urban design guidelines

As part of the English speaking world Australia has developed some urban design guidelines that originate from global sources, but seek to be relevant in local contexts. The 'Agenda for Urban Quality in Queensland' produced by the Urban Design Alliance of Queensland (UDAL Qld) is intended to be responsive to the climate and character of place, in particular Brisbane and South East Queensland (UDAL Qld 2005).

The 'Fifteen Qualities of Good Urban Places' published on the website of the Gold Coast City Council are intended for the guidance of development applications that could achieve urban design planning bonuses from the council and facilitate development approval (Gold Coast City Council 2009). Although the UDAL Qld 'Agenda for Urban Quality in Queensland' was not referenced by the GCCC, the textual analysis clearly identified the UDAL guidelines as a major influence in forming the GCCC 'Qualities of good urban places'.

These guidelines were all examined to identify the identity, focus and goals or intent of the selected urban design guidelines and their contributory authors (table 3.2.1a).

Table 3.2.1a: Analysis of the Australian UDAL and GCCC Urban Design Guidelines (Author 2011)

Name and Origin	Identity	Focus	Goals
An Agenda for Urban Quality in Queensland UDAL Qld Queensland	<p>Identity: Alliance of architecture, urban design and planning, and development professionals in Queensland.</p> <p>General Orientation: Declared people oriented urban form from an institutional top down political paradigm of creating places for people through political alliances.</p> <p>Policies and Institutions: Prime Ministers Urban Design Taskforce, National Office of Local Government, Qld Department of Transport, Ministry of the Environment NZ, Department of Urban Affairs and Planning NSW, W.A. Planning Commission, GCCC. Australian Institute of Urban Studies.</p> <p>Linked to: Brisbane City Council, QUT, PIA, Congress for New Urbanism, Smart Growth.</p>	<p>Focus:</p> <p>Social inequity, poor development standards,</p> <p>Adversary:</p> <p>Alignment of a few design consultancy companies to government.</p> <p>Published Influences: Tibbalds, 1992; Engwicht, 1999; Geason and Wilson, 1989.</p>	<p>Goals:</p> <p>To contribute and collaborate to the process of urban development to promote higher standards of urban design in the cities and towns of Queensland and Australia.</p>
Name and Origin	Identity	Focus	Goals
Fifteen Qualities Of Good Urban Places Gold Coast City Council	<p>Identity: Produced by the urban design unit of the planning and development department of the city council.</p> <p>General Orientation: The qualities appear to be part of a platform of information aimed at educating people involved in the building and development industries of the city about urban design. The qualities are nested with guiding principles, and the urban design awards, conference and seminars the council sponsors.</p> <p>Policies and Institutions: GCCC, Gold Coast Planning Scheme.</p> <p>Linked to: Not stated.</p>	<p>Focus:</p> <p>Encouraging the quality of urban design development in the city.</p> <p>Adversary:</p> <p>Not stated but inferred as poor urban design values amongst some people in the development and building industry in the city.</p> <p>Published Influences: No published influences. However textually there appears to be an origin within UDAL QLD adapted for the guidance of the planning department of the city.</p>	<p>Goals:</p> <p>The stated goals of the Council with regard to the principles, qualities and associated initiatives of future standards of urban design in the city is:</p> <p>Council is committed to upholding quality design and urban design principles in conjunction with our goal of protecting and enhancing our magnificent natural environment.</p>

The political intent of the UDAL agenda (2005) is clear. It is oriented towards effecting change through creating political alliances of planning bureaucrats, urban design identities,

architects and professional associations who hold a new urbanist and social equity place-making design philosophy. Interestingly, the agenda identifies unnamed design consultancies' alignment to government as an adversarial focus. It is suspected that this reference is aimed at global engineering and design consultancy firms originating in the U.S.A. that are responsible for much of the major public transport infrastructure in Australia.

The UDAL agenda (2005) does articulate the characteristics of public places and spaces from a user's perspective: how well a place can affect their lives, how they interact with it, what it means to them, how it functions, and how it meets their psychological, spiritual, cultural, political and economic needs. It contains limited textual descriptions of the values of the qualities of good urban places, but it does include drawn and photographic images which imply what those values might be.

In avoiding any description or definition of the values of the qualities, the UDAL agenda largely relies on the reader to construct those values for themselves. The agenda includes useful, but general, descriptions of the values of the qualities that are cerebral rather than practical. This is possibly because the intended audience was expected to understand the narrative and nuances of shared practices in architecture, urban design and planning.

The Fifteen Qualities of Good Urban Places (GCCC 2009) was useful in suggesting characteristics but had no contribution to forming observable urban design attributes. For example the phrase: 'A good place will consider and provide for all human needs.' offers no real guidance to qualify the urban design attributes that could be applied to the analysis of the beach precincts. This use of generalised statements is an observable tendency of the literature from government sources, including the Healthy Cities movement. It may also be a consequence of the permissive urban planning paradigm that is embedded in Queensland's planning legislation, schemes, policies and procedures (England 2004).

The GCCC qualities of good urban design have been constructed as part of an educational initiative for developers and potential development applicants to improve the quality of development proposals in the city. This in turn is expected to gradually improve the built environment of the Gold Coast. They are not meant to be self-contained and are nested in a range of other initiatives intended to improve the urban design outcomes for the city (Gold Coast City Council 2009). The lack of specific guidance given for the interpretation and implementation of the respective qualities made the UDAL and GCCC qualities difficult to

directly adopt for the purposes of the study, even though they were produced for a local Queensland context.

The other Australian urban design guidelines examined include the Queensland Government sponsored 'Crime Prevention through Environmental Design for Queensland' (CPTED) intended to reduce crime through good design and effective use of the built environment (Lake *et al.* 2007); and the design principles of 'Healthy Spaces and Places', which is a government initiative intended to improve the degree of physical activity in the Australian community (Planning Institute of Australia 2009b).

'Healthy Spaces and Places' Design Principles

The Healthy Spaces and Places and CPTED guidelines both originate as Australian government initiatives, articulated at commonwealth and state level, and implemented at a local government level. Each of these guidelines have globalised origins and, in the case of the Healthy Spaces guidelines, they originate as iterations of the United Nations and World Health Organisations guidelines intended to create awareness of the health implications of urban design and planning decisions (Kenzer 1999).

The 'Healthy Spaces and Places' guidelines, as expressed in the Healthy Spaces and Places literature (Planning Institute of Australia 2009b), lack clear definitions and were often open to interpretation (table 3.2.1b). However, they do include a few easily-adapted indicators of urban design attributes that could be used in the intended analysis of the beach precincts.

The design principles are written for a bureaucratic audience, well versed in the literature of active healthy living and regional planning. The principles constantly promote active transport and always list cycling infrastructure in close association with walking, without implicitly promoting exclusive walking environments (Giles-Corti *et al.* 2008; Planning Institute of Australia 2009a; Planning Institute of Australia 2009b).

The focus on active transport, along with the complexity, repetition and confusion of meanings encountered in the 'design principles', led to their rejection as suitable tools of analysis of the urban design of beach precincts. The analysis of the 'design principles' suggested that they were not intended to change the spatial arrangement of the current urban form to favour walking and only indicate some support for future development to do so.

Table 3.2.1b: Analysis of the Healthy Spaces and Places Urban Design Guidelines (Author 2011)

Name and Origin	Identity	Focus	Goals
Healthy Spaces and Places	Identity: Global public health initiative of the World Health Organisation adopted by all levels of Australian Government.	Focus: A national guide for planning, designing and creating sustainable communities that encourage healthy living.	Goals: Achieving minimum physical activity standards for different demographic groups to reverse public health trends associated with the built environment.
Design Principles	General Orientation: The design principles are intended for a government, health professional and developer audience and aim to influence the development of built environments to inherently encourage active living.	Using a raft of measures to educate and engage health professionals, design professionals and level of governments and communities of interest to encourage different physical activity patterns in existing settlement and deter replication of undesirable development patterns.	
Australian Government	Policies and Institutions: World Health Organisation, Federal, State and Local Government policies and active and healthy programs initiated by local governments for instance the Gold Coast Physical Activity Plan. Linked to: Heart Foundation of Australia, Planning Institute of Australia, Australian Local Government Association, and CPTED International. Published Influences: Giles-Corti <i>et al.</i> 2005; Maller <i>et al.</i> 2002; Ellaway <i>et al.</i> 2005; Gehl, 1989; Sitte, 1989; Booth <i>et al.</i> 2005; Frumkin <i>et al.</i> 2004; Gebel <i>et al.</i> 2005; Pappas <i>et al.</i> 2007; Newman and Kenworthy, 1999, 2000; Frank, Andersen and Schmid, 2004; Wen <i>et al.</i> 2006; Baum and Palmer, 2002; Sugiyama <i>et al.</i> 2007; De Vries <i>et al.</i> 2003; Grahn and Stigsdotter, 2003; Grow <i>et al.</i> 2009; Li, Fisher and Brownson, 2005; Tsuji <i>et al.</i> 2003; Whitzman, 2008; Cavanaugh, 1988.	Adversary: The modern lifestyle epidemic of mental health issues, obesity, diabetes, asthma and cardiovascular disease associated with the sprawling car dependent development of modern cities and lifestyle trends.	

Walkability is an explicit focus for the research and is seen as the key social and movement activity for the analysis of the public space network of the beach precincts. It is also the most common form of exercise for Australians above 15 years of age (healthyplaces.org 2009). Some recent cycling provision on the Gold Coast has made some places more difficult for pedestrians by widening roads as bike lanes are created. Vehicular dominance is still maintained and the practice of walkers sharing footpaths with cyclists and other wheeled vehicles continues (Gold Coast City Council 2012).

Crime Prevention through Environmental Design (CPTED)

The Queensland version of the ‘Crime Prevention through Environmental Design’ (CPTED) ‘Essential Features of Safer Places’ guidelines were almost a match for the research in the scale of precinct development, the identification of environments specific to use and the principles and guiding ideas (table 3.2.1c).

Table 3.2.1c: Analysis of the CPTED Urban Design Guidelines (Author 2011)

Name and Origin	Identity	Focus	Goals
CPTED Urban Design Guidelines Essential Features of Safer Places Queensland Government Australia	<p>Identity: Government led and sponsored initiative with extensive stakeholder involvement of levels and departments of government, and planning, building, police and community inputs.</p> <p>General Orientation: The essential features of safer places are oriented towards particular urban environments from buildings, to places like neighbourhoods and precincts and routes for walkers and cyclists. Each type of environment has identified essential features that allow specific design approaches that have been shown to reduce crime.</p> <p>Policies and Institutions: Policies in various Australian and New Zealand state departments involved in health, tourism, urban development and justice. International CPTED Association. Various development authorities such as The Strand, Townsville. Local Councils in QLD.</p> <p>Linked to: Queensland Police Service, LGAQ, Department of Infrastructure and Planning QLD, PIA, UDIA and James Cook University.</p>	<p>Focus: Preventing crime against people and property.</p> <p>Adversary:</p> <p>Crime and Criminality.</p> <p>Published Influences: Jeffrey, 1972; Jacobs, 1961; Crowe, 1990; Newman, 1972; Wekerle and Whitzman, 1995; Byrne, 2007; Smith, 2007; Lake, 2007; Richards, 2007; Edgley, 2007.</p>	<p>Goals: Encourage design professionals, developers, and councils to include crime prevention strategies in their re/developments of the built environment using specified principles and guiding ideas in specific urban environments.</p>

However, the strength of the guidelines in designing environments to eliminate crime is also considered a weakness in analysing a place for activities. The researcher is aware of the unintended consequences of over-designing for safety and thereby eliminating desirable aspects of the built environment, especially its opportunities for recreation for children (Frost 2006; Staempfli 2009) and activity (Gallart 2010). The ‘Essential Features of Safer Places’ appear sometimes to be overzealously pursued in their application to eliminate any form of risk. This is despite principle 6D in the guidelines cautioning that the safety should be consistent with the purpose of the place (Lake *et al.* 2007).

The ‘Healthy Spaces and Places’ and CPTED guidelines did strongly suggest that the attributes of urban form that best meet human needs is a built form which is designed to be at a human scale and that the desirable urban spatial arrangement is one which makes activities, benefits and services easily accessible and interconnected. The urban form which is promoted

is proposed to be accessible and connected by being compact, walkable and diverse. The resulting urban form is also intended to be governed and managed to ensure universal and egalitarian access (Giles-Corti *et al.* 2005).

Other Prominent Urban Design Guidelines from English Speaking Sources

The other urban design guidelines examined include the ‘Principles of New Urbanism’ (New Urbanism.org 2012), the ‘LEED 2009 for Neighborhood Design’ neighborhood development checklist (U.S. Green Building Council 2009), the ‘Urban Design Compendium One’ (Llewellyn Davies 2007) and the ‘New Zealand Urban Design Protocol’ (Pirrit *et al.* 2005).

The ‘Principles of New Urbanism’ (table 3.2.1d) are perceived as influenced by the development of the other contemporary guidelines. The principles were developed in response to the rejection of urban sprawl and regional planning and are politically rooted in the rejection of car dominated development. There has also been a degree of interaction and evolution between those who reject sprawl and those who promote ‘green’ sustainable development responses to development, resulting for example in ‘Smart Growth’ (American Planning Association 2002)

Table 3.2.1d: Analysis of the Principles of New Urbanism (Author 2011)

Name and Origin	Identity	Focus	Goals
Principles of New Urbanism Congress for the New Urbanism United States of America	<p>Identity: Simple statement of principles of urbanism by the Congress for the New Urbanism. Elements have been absorbed into the Smart Codes that incorporate Smart Growth and New Urbanist Principles.</p> <p>General Orientation: To encourage municipalities to adopt smart codes of planning ordinance. To encourage a community of practice amongst design, development, finance and planning professionals oriented to the principles of new urbanism and smart growth.</p> <p>Policies and Institutions: Smart Codes adopted by various municipalities such as the City of Miami, Portland and National Harbour.</p> <p>Linked to: LEED ND, Smart Growth Network, Universities of Miami, Georgia and Notre Dame. The Prince’s Foundation for the Built Environment UK, INTBAU.</p>	<p>Focus: Principles to be applied to projects at the full range of scales from a single building to an entire community.</p> <p>Adversary: Primarily American car dependent sprawl development that has produced a disconnected geography of nowhere.</p> <p>Published Influences:</p> <p>Not listed but known to include: Arth, 2010; Calthorpe, 1993; Cozens, 2008; Duany, 2003; Duany and Plater Zyberk, 2000/3; Dutton, 2001; El Nasser, 2005; Goetz, 2003; Grant and Perrott, 2009; Jacobs, 1961; Katz, 1994; Kelbaugh, 2002; Kunstler, 1994/8; Popkin <i>et al.</i> 2004; Talen, 2005; Tagliaventi, 2002; Watson <i>et al.</i> 2004; Waugh, 2004;</p>	<p>Goals: Returning to a form and pattern of development based on the pre car American towns but with a 21st century architectural form, also known as traditional neighborhood development, neo-traditional or new urban neighborhoods</p>

The 'principles' were produced by the Congress for New Urbanism to encourage municipalities to adopt smart codes of planning ordinance. They are also designed to encourage a community of practice amongst design, development, finance and planning professionals oriented to the principles of new urbanism and smart growth that is similar to the intent of the UDAL agenda (2005).

Its political goals are to return to a form and pattern of development based on the pre-car American towns but with a 21st century architectural form, also known as traditional neighborhood development, neo-traditional or new urban neighborhoods. This is intended to happen in a range of scales from a single building to an entire community (Calthorpe and Fulton 2001).

The 'checklist' was developed through a partnership between the CNU, the Natural Resources Defence Council and the US Green Building Council. The 'checklist' was designed to establish standards for assessing and rewarding 'environmentally superior' development practices with the LEED Green Building Rating System™ (U.S. Green Building Council 2010) (table 3.2.1e).

The 'checklist' intends to influence those involved in the development industry to adopt green and new urbanist principles in the design and build of their new projects (U.S. Green Building Council 2010). The way the 'principles' and 'checklist' operate politically identifies them as a resistance identity group who have evolved into a project identity group.

The Smart Growth project group seek to become the dominant group in society over the production of new and restored urban forms. They intend to achieve their goals through influencing the decision makers in development, finance, professional practice and government to adopt their perspectives. The 'checklist' is one of the political tools they employ to achieve their aims.

The Principles of New Urbanism (2012) were produced for an American context and, like the English Urban Design Compendium (2007) streets, buildings, block size and shape dominate the text. The focus on walkability is useful but the definition of values is coarse-grained and not entirely suited to the beach precinct context. Finally the LEED ND (2009) checklist is primarily oriented to rating new developments rather than existing developments. Although, it's rating system for the attributes of a sustainable new project may be useful in defining the degree of connectivity, walkability and universal design of the beach precincts.

Table: 3.2.1e: Analysis of the LEED 2009 Neighborhood Development Checklist (Author 2011)

Name and Origin	Identity	Focus	Goals
Neighbourhood Development Checklist Green Building Council United States of America	<p>Identity: Developed through a partnership between the Congress for New Urbanism, Natural Resources Defence Council and the U.S. Green Building Council.</p> <p>General Orientation: A voluntary rating system designed as an incentive to builders and developers of new neighborhood developments to locate design and construct for residential, commercial and mixed use to promote walking, reduce pollution, and improve sustainability, liveability for all income levels.</p> <p>Published Influences:</p> <p>Policies and Institutions: Policies and practices of practitioners in the development and associated industries.</p> <p>Linked to: The Blue Moon Fund, Centers for disease control, EDAW, EPA, The Johnson Foundation, National Endowment for the Arts.</p>	<p>Focus: To influence those involved in the development industry to adopt green new urbanist and smart transport principles in the design and build of their new projects.</p> <p>Adversary: Not stated but by inference it would be similar to those of the Urban Design Compendium.</p> <p>Authors: Not stated but by textual analysis and inference thought to be convergent with the authors that influenced the creation of the Principles of New Urbanism, Smart Growth and the Urban Design Compendium.</p>	<p>Goals: To establish standards for assessing and rewarding environmentally superior development practices within the LEED Green Building Rating System™.</p>

The ‘New Zealand Urban Design Protocol’ (2005) and ‘Urban Design Compendium’ (2007), from England, are both initiatives of their respective governments although they differ in their political intent and organisation. The identity of the ‘protocol’ is as a whole of government initiative to produce agreements between the national and local governments with developers, investors and consultants, educational and professional institutes, sector organisations, community and Iwi (McIndoe *et al.* 2005).

The political intent of the ‘protocol’ is explicitly linked to guiding documents in a national policy guidance framework that intends to create safer communities, to reduce violence and sexual violence, encourage sustainable development, and manage the nations urban heritage and resources. It intends to do this in the creation of places where business, social and cultural life can flourish by improving the quality of urban design and putting a value on that design.

The ‘compendium’ (2007) is a United Kingdom government political initiative to create a development agency for England, comprising English Partnerships, Housing Corporation and

the Urban Design Task Force. The 'compendium' was oriented and written to facilitate a political platform to guide new and regenerative development in England.

The political orientation of the 'compendium' reflects the different political structures of the United Kingdom. It is not a whole of government initiative, and Scotland, Wales and Northern Ireland are not included in its intent. It is linked to professional associations such as the Royal Institute of Chartered Surveyors (RICS), the Commission for Architecture and the Built Environment (CABE) and the Urban Design Alliance (UDAL).

Government departments with links to the 'compendium' include the then Department of Environment, Transport and the Regions (DETR) and the Department of Trade and Industry (DTI). The global reach and influence of these associations and departments can be traced through apparent networks of influence with the West Australian Planning Commission, UDAL Queensland and the New Zealand Urban Design Protocol, amongst others.

The New Zealand Urban Design Protocol (2005) has a good structure for whole of government adoption of improved urban design quality, but it has some of the same problems of vagueness and confusion in definition as the Healthy Spaces and Places guidelines (2009). The New Zealand Urban Design Protocol predates the comparable Australian Urban Design Protocol (Infrastructure Australia 2011).

The invention of the seven C's, although catchy, appears a little contrived. The qualities to describe each of the desirable urban design outcomes are thought to be selectively useful for the urban design analysis of the beach precincts, but they lack a range of definition and are open to wide interpretation of meaning. This probably arises from the intent to create consensual cross-sector commitment. However, in striking a neutral position, the protocol creates vagueness in definition of what actually constitutes the attributes of good urban design principles.

The context and orientation of the Urban Design Compendium and Neighbourhood Checklist would be difficult to apply directly to an analysis of Gold Coast beach precincts although they have many admirable indicators, examples and elements. They are essentially for a different type and scale of development oriented to different types of places of urban morphology without the relationship of the natural and built environment found in beach precincts.

3.2.2 Summarising the Attributes of Good Urban Design from the Guidelines

During the research into the different guidelines it seemed that although they all help to make sense of qualities of different urban contexts from particular perspectives, none of them was entirely suited to the intent, context and location of the research. Using them in their extant form for an urban design analysis did not appear to be a suitable fit of practical theory to the interpretation of the case study areas. This arises directly from their conception as theory from observed properties of places that were not beach precincts, but were specific urban contexts of cities and towns found elsewhere.

When the guidelines were textually analysed for their implicit meanings, and the identification of desirable properties of place, it was possible to identify four urban design principles that expressed values that could be used in an urban design analysis of beach precincts related to use and activity.

The different guidelines all referred in some way to how people could access and move through the urban form broadly in terms of *accessibility*, how different features of the urban form met *human needs* in an appropriate *human scale*, how the more *diverse* the urban form was the closer it met people's preferences and provided opportunity and choice, and finally how well the places were cared for or *governed*, affected the possible use of places. These common meanings are found in all the different urban design guidelines examined and could be seen as essential meanings.

Although the terminology in each of the urban design guidelines studied varies, it was possible to identify accessibility, diversity, human scale and need, and governance as organising themes in all the documents.

The different urban design guidelines were then re-examined using the organising principles of accessibility, diversity, human scale and need, and governance in order to identify a suitable set of associated attributes for each of the urban design principles adopted for the research. Where the terms used were different to these, they were allocated to one of these design principles from their description and intent.

The terms adopted for good urban design identified from the guidelines were assigned to one of the four urban design principles for this research, as shown in table 3.2.2a.

Table 3.2.2a: The Urban Design Guidelines as Attributes of the Design Principles of the Research (Author 2011)

Urban Design Guidelines	Accessibility	Diversity	Human Scale and Need	Governance
UDAL Agenda SEQ (2005)	Connected Accessible		Meaningful Legible Humane	
GCCC Qualities of Good Urban Places (2009)	Public and Private Sides Qualities of Edges Connectivity Access	Variety Adaptability and Versatility Richness	Human Scale Urban Greenscape Safety Community Comprehensibility Human Need	Sustainability Space and Space Making Environmental Sensitivity
Healthy Spaces and Places Design Principles (2009)	Connectivity	Mixed Density Mixed Land Use	Aesthetics Environments for All Parks and Open Space Safety and Surveillance Social Inclusion	Active Transport Supporting Infrastructure
CPTED: Essential Features of Safer Places (2007)	Neighbourhood's must be designed for walking cycling and the use of public transport		Neighbourhoods must be designed to promote surveillance of public realm.	Community ownership of the neighbourhood's security
New Zealand Urban Design Protocol: Key Urban Design Qualities (2005)	Connection	Choice	Context Character Creativity	Custodianship Collaboration
Urban Design Compendium: Key Aspects of Urban Design (2007)	Make Connections	Enrich the Existing Mix Use and Forms	Places for People Work with the Landscape	Manage the Investment Design for Change
Congress for the New Urbanism: Principles of New Urbanism (2010)	Walkability Connectivity	Mixed use of Diversity Mixed Housing	Traditional Neighbourhood Structure Quality of Life	Increased Density Quality Architecture and Urban Design Green Transportation Sustainability
LEED (2009) Neighbourhood Checklist	Proximity of Housing and Jobs Walkable Connected	Compact Mixed Use	Preferred location Universal Design Tree Lined	Conservation of Land Habitat Protection Transit Oriented Neighbourhood Schools Certified, Energy and Water Efficient, Solar Orientation, Adaptive, Recycling Localised, Infrastructure.

It would appear that the focus of the urban design guidelines examined can be analysed according to their relative emphasis of the urban design principles selected for this study. For example the CPTED and the New Zealand Urban Design Protocol appear to be focused on human scale and need as well as governance, but in different patterns and with different degrees of emphasis. The UDAL agenda appears focused on accessibility and human scale and need and the remaining guidelines have different patterns of all four selected urban design principles of the research.

If we use the visual/aesthetic or social usage classification of Holden (1996), along with the political identities of dominant, project or resistance groups from Castells (2007), and the influence of public health and safety, social and economic improvement and urban structural approaches to urban design it is possible to understand the orientation of the different urban design guidelines and, in doing so, their usefulness to the intent of this research project from the values identified as important in the various guidelines.

The UDAL 'Agenda' is both a visual aesthetic and social usage project that intends to influence the dominant group decision-making process for the production of urban design in South East Queensland (SEQ). The GCCC 'Qualities of Good Urban Places' appears to be evidence of a project group of UDAL that is embedded in local government and seeks to influence the urban form of the Gold Coast by social and economic improvement of the urban structure through its connection to the dominant governance, development and construction groups in the City.

The Healthy Spaces and Places 'Design Principles' and the CPTED 'Essential Features of Safer Places' are both projects of different dominant groups with global inspiration and connection. Each project group intends to reshape the current and future urban form for the social and economic improvement of society. The emphasis in both groups is for local changes that engage different levels of government in partnership with local community to achieve cultural and behavioural changes in local populations.

Each of the dominant groups draw on the writings of similar authors from both the visual-aesthetic and social usage traditions but with different emphasis on the desirable urban form that should emerge. However, both groups have adopted the active transport philosophy which conflates walking, cycling and public transport as preferred movement activities.

All the alliances are globally linked to social usage, visual aesthetic, sustainable development, environmental and other project groups, including resistance and dominant identity groups who wish to influence the urban form of the different nations from their cultural and historical perspectives.

The stated focus is the same in the New Zealand and English urban design guidelines and all three guidelines identify existing planning regimes as the adversary. They all propose to achieve their stated aims by processes of education and dissemination of information to change practices, introduce programs and policies they would prefer (see table 3.2.2b).

Table 3.2.2b: Analysis of the Focus and Goals of Three National Urban Design Guidelines (Author 2011)

Urban Design Guideline	Stated Focus	Adversary	Project Goals
New Zealand Urban Design Protocol (2005): Key Urban Design Qualities	The quality of the urban design in delivering places that creates: sustainable, social, environmental and economic value to the local community and country.	The approval of poor quality social, economic and environmentally unsustainable development by the planning authorities in reactive quantitative planning and development regimes.	To create a consensual cross-sector commitment to quality urban design of cities and towns, through alliances and partnerships of signatories to the protocol and providing a national resource of tools, actions, shared experiences to guide future developments.
LEED US Green Building Council (2009): Neighbourhood Checklist	To influence those involved in the development industry to adopt green new urbanist and smart transport principles in the design and build of their new projects.	Not stated but by inference it would be similar to those of the Urban Design Compendium.	To establish standards for assessing and rewarding environmentally superior development practices within the LEED Green Building Rating System™.
Urban Design Compendium One (2007): Key Aspects of Urban Design	The quality of the urban design in delivering places that creates: sustainable, social, environmental and economic value to the local community and country.	The approval of poor quality social, economic and environmentally unsustainable development by the planning authorities in reactive quantitative planning and development regimes.	To help all those involved in the delivery of places with guidance on achieving and assessing the quality of urban design in developing, regenerating and restoring urban areas.

The final urban design guidelines examined have been produced in a historic, geographic and cultural context similar to that found in Australia, rather than the context of European countries from which many of the other guidelines have their origin. New Urbanism arose in opposition to the perceived failure of post-war, car-dependant cities to reproduce the social structures and aesthetic values of ‘traditional’ American cities and towns, reflected in the critical works of the journalist Jane Jacobs (1961) and geographer James Kunstler (1994).

This rejection of post-war American planning and development practices led to the development of a project group from a resistance group alliance of architects, planners, social

activists, lawyers and real estate identities who intended to revolutionise the production of place in the United States by reinstating the walkable neighbourhood (Calthorpe 1993; Calthorpe and Fulton 2001).

A perceived difference between the New Urbanists and their European counterparts is that they emphasise walking and social activity and the Europeans favour walking, cycling and public transport. This may be significant in that although the post war urban structures both groups oppose are similar. The car is a much more dominant influence in the USA and Australia than in Europe and the American reaction may be more suited to the redesign of Australian cities than the European reaction (Hall and Porterfield 2001; Steutville and Langdon 2003).

The urban design guidelines all contain a political agenda intended to influence the political process. Considering the textual similarities, they reflect the influence of key writers such as Matthew Carmona (Carmona *et al.* 2001) for the values of urban design and planning in England and New Zealand, Andres Duany (2002) for New Urbanism, Peter Newman for sustainable urban structure and transport (Newman and Jennings 2008), Carolyn Whitzman (2008) for a gender and safety perspective of urban form and Jan Gehl (2010) for the improvement of city design to support active transport, social and community activity.

It is in the light of understanding the political and cultural genesis, stated focus and goals of the different urban design guidelines that we now move to the selection of the attributes of the four urban design principles to be used in the urban design analysis of the selected Gold Coast beach precincts. The next section will identify the selected design principles that will be used in the analyses of the three different beach precincts.

3.3 The Selected Urban Design Principles for the Research

The different urban design guidelines examined are well researched and founded on the work of respected authors who have been cited, incorporated and applied in urban design analysis by other researchers, designers and practitioners in the built environment professions. It was thought possible to deconstruct and reassemble a simple set of urban design principles that drew on the research contained in the urban design guidelines studied.

Having selected the essential and commonly agreed principles of urban design, it was decided that, for the purposes of the study, the urban design principles of **accessibility**, **diversity**, **human scale and need**, and **governance** would be used for the urban design analysis of the

selected beach precincts. These selected urban design principles can accommodate all the various aspects, features, principles and qualities described in the urban design guidelines in a simplified construct of urban design intended for evaluation of walkable public places.

The analysis of the different guidelines identified the attributes, characteristics and values of ‘good’ urban design that can be logically attached to one or other of the selected urban design principles. Reorganising the literature and examining the attributes of the desirable design characteristics from the selected guidelines, it can be seen that they may be re-interpreted as attributes of the four urban design principles suitable for the examination of the urban design of the beach precincts.

This approach allows the analysis of the urban design of beach precincts to be conducted in the spirit of existing urban design guidelines, but separates them from the original context, political intent and motivation, adversarial focus and values of those guidelines. It allows re-interpretation of the urban design analysis to a particular focus on beach precincts as a unique case of built development adjacent to the natural environment, meeting the particular needs and desires of the people who use them.

The attributes of all the selected urban design principles are all interrelated and co-dependent. They are concerned with how people use the built environment and its public and private spaces, places, forms and edges. For example, a high degree of technical connectivity of the street layout of a place is of little real value to people if barriers for walking are erected at intersections and edges and the public spaces are oriented to high speed vehicle traffic.

The attributes of *walkable, suitable and available* were assigned to the principle of **governance**. The attributes *connected, permeable and openness* were assigned to elaborate the principle of **accessibility**. *Opportunity, choice and supported* was assigned to the principle of **diversity**. *Sociable, safe and attractive* were assigned to the principle of **human scale and need**. The attributes of the selected urban design principles are elaborated in the following section.

Some consideration was given to describing *connected* as the peak attribute of the urban design principle of accessibility, *opportunity* as the peak attribute of diversity and *sociable* as the peak attribute of human scale and need. However, some uncertainty surrounded the validity of these choices as peak attributes of the associated urban design principle and

further peer reviewed research outside of the scope of this thesis is thought necessary before this choice can be validated (Figure 3.3).

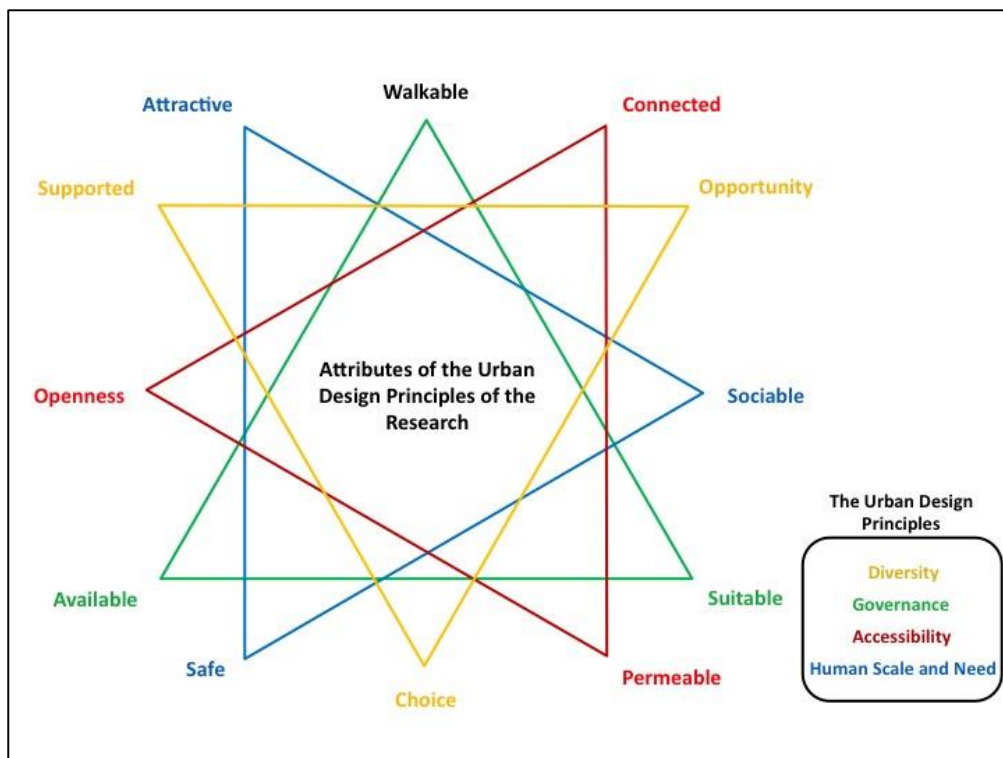


Figure 3.3: Attributes of the Selected Urban Design Principles of the Research (Author 2013)

3.3.1 Governance

For the urban design principle of governance it was possible to select from the guidelines descriptions of desirable place characteristics of place attributes. The place characteristics of the walkable, suitable and available attributes of the urban design principle of governance of beach precincts were compiled from the analysis of the urban design guidelines to provide the following summary of those attributes of governance (table 3.3.1).

Governance, as a design principle, is how the public and private spaces of the precinct are arranged, apportioned, provisioned, financed and managed. It is how movement, access to amenity and activity are permitted or prohibited and how a person's needs and desires, activities, behaviours, and preferences are enabled or restricted.

Governance is usually enacted within the different levels of government who author the policies and processes that implement governance of the public space and control the use of the natural and build environments of the beach precinct. In this thesis it may include various

associations, institutions, businesses, body corporates and local resident associations if there is an effect on the public access and use of beach precincts.

Table 3.3.1: The Desirable Values of the Attributes of Governance (Author 2011)

Urban Design Principle: Governance	Desirable Values of the Attributes
Elaborative Attributes: Walkable (The Key Attribute of the Urban Design Principles)	<p>The responsibility for the design and management of a place to be walkable is political and enacted by government in favour of walking. Walking routes connect with high levels of amenity and choice of activities and destinations along routes. An urban structure carefully designed to make walking convenient, pleasant and safe. Walkways should allow people to go where they want to go, rather than follow preconceived drawing-board paths. A movement priority that favours the walker over other modes of movement. Walking is an activity and should not be assumed to be a mode of movement. Walkers may be deep in thought, young, elderly, partially sighted, deaf, movement and otherwise impaired and routes, places and spaces should be designed accordingly with a minimum number of conflict opportunities with wheeled vehicles.</p>
Suitable	<p>The design, development and management of spaces, places and edges is oriented towards dominant values such as sustainability, efficiency, active healthy living or other political imperatives that consider the climactic, topographic or biophilic attributes of the precinct. Spaces and facilities are oriented to the intrinsic values of place and are not allocated to create conflict amongst potential users. Buildings, facilities and amenities are sturdy, with fittings that are not flimsy and surfaces that are not easily vandalised. Appropriate places are designed to provide opportunities for connecting with nature, seeking privacy and quiet contemplation. Transitional zones between buildings and buildings and spaces are carefully designed for mixing uses.</p>
Available	<p>The edges between commercial, private and public space, places and forms are activated to produce different uses, activities and experiences. A mix of destinations and land uses supportive of extended stays in the public spaces of the beach precinct. Appropriate activities and events programs. Feedback systems to report problems to responsible authorities. Carefully considered active uses in park spaces such as cafes within or at the edge of the park. Public facilities such as transport stops, toilets, rest areas, cycle storage and changing facilities should be conveniently located to routes, amenities, activities and destinations.</p>

3.3.2 Governance of Walkability

It was noted during the analysis of the urban design guidelines that the characteristics which were assigned to an attribute of the urban design principles in one guideline could sometimes be used to describe a different attribute in other guidelines. Walkability, for instance, is usually assigned alongside and in support of accessibility or connectivity in the guidelines. However, walkability is prioritised in this research as the key or peak attribute of governance in the analytical framework of the public space network of the beach precincts.

Walkability, as the key or peak attribute, is the unifying attribute of place that allows all the other desirable urban design attributes to be achieved. In the urban design analysis of the Gold Coast beach precincts, the other attributes of the selected urban design principles will be analysed from a walker's perspective. This is to ensure that the urban design analysis is aligned to the intent of the research and can be replicated by other researchers.

The orientation of the design of any place to a particular mode of movement reorders all the priorities and hierarchies of space allocation in that place. The governance of place as walkable is, therefore, clearly the key to the urban design analysis of the beach precincts. If any place is dominated by other modes of movement this will in turn alter all the measures and characteristics of all the attributes of the other urban design principles.

This decision to assign walkability as an attribute of the design principle of governance was made in response to the practice of assigning spaces for movement and activity being usually the area of responsibility of land use and transport planners (Queensland Government 2009). Decisions are made by these professionals determining the degree of walkability that is created in particular places and spaces.

If other forms of mobility are selected as the desirable governance attribute such as cycling, public transport or driving, then this will alter the characteristics of all the other principles and the attributes associated with them.

Change in governance policies regarding movement will also affect the application and effect of the other three urban design principles simply by reordering priority, hierarchy and relationships between the spaces, places and forms of the precinct to one particular favoured mode of movement. If walkability is to be achieved it must be moved to political dominance over the other movement modes and this can be achieved by assigning it as the key attribute of governance.

The intended walk through analysis of the beach precincts (Appendix A) will use the following summary of the urban design principle of governance and the associative attributes as part of the urban design analysis of the beach precincts:

Governance: *Has the locality been arranged for people to walk in it?* In a **Walkable** place the walker has movement priority and is not in conflict with other forms of transport. There is a compact public space network with a hierarchy of modestly dimensioned spaces where the importance and use of the different spaces is clear.

There are **Suitable** public and private space designs, developments and management of public and private spaces, places and edges that provides shelter, facility and amenity. The public spaces design does not create unnecessary conflict amongst users. Space is allocated to provide opportunities to draw benefit from the particular and inherent attributes of place to its users. **Available** describes how the spaces, places, forms and edges of a locality are arranged and oriented to the attributes that create value in the precinct, thereby allowing the locality to produce different uses, activities and experiences for the users of the precinct. We now move on to the definition of the attributes of the urban design principle of accessibility.

3.3.3 Accessibility

Accessibility, as a design principle, is concerned with how people move around in the beach precinct and how they use its public spaces. The principle is described by three attributes of accessibility extracted from the guidelines: connected, permeable and openness (table 3.3.3).

Table 3.3.3: The Desirable Values of the Attributes of Accessibility (Author 2011)

Urban Design Principle: Accessibility	Desirable Values of the Attributes
Elaborative Attributes: Connected	A visible fine mesh network of routes with physical, visual and psychological connections to views, landmarks, and destinations. Paths that integrate public and private spaces with good walking surfaces, avoiding steps and changes of level. The available routes provide connections between uses, activities and environments. The walking route network has many short links, numerous intersections, and minimal dead ends.
Permeable	The spaces, places and edges do not limit movement from place to place. People are not deterred by the design or appearance of spaces, places, forms and edges from accessing an activity, amenity or facility. Frequency, priority and movement nature of street crossings does not inhibit the use of places. Width and edges of roads are appropriate to ease of movement. Navigation and orientation is facilitated by focal points, edges, landmarks, skylines, natural and built features, distinctive places, views and vistas.
Openness	No unnecessary barriers based on age, gender, social status, mobility, infirmity or culture to access activity, amenity or facility. Public spaces, places, edges, buildings and destinations are clearly signed, well lit, detailed and legible to potential users and invite them to enter and purposively use them. International graphic signage is legible and well sited.

These attributes have the following desirable characteristics: **Connected**, how easily people can get to the activities and destinations both within and from outside of the precinct.

Permeable, how well people are able to negotiate the visible, invisible, implied and actual

barriers to movement and access to activity, facility and amenity in the precinct. **Openness**, which is interpreted as including characteristics of the public space that are concerned with how people understand the public and private spaces as being open or closed to their use. We now move on to the definition of the attributes of the urban design principle of diversity.

3.3.4 Diversity

Diversity, as a design principle (table 3.3.4), examines what people can do in the precinct how well a place provides for and sustains the activities, physiological and psychological needs of visitors and residents of the precinct. It concerns the diversity of private and public land spaces and uses, building types, facilities and amenities meeting the diversity of potential uses and users of the precinct. The identified attributes of diversity are seen as:

Table 3.3.4: The Desirable Values of the Attributes of Diversity (Author 2011)

Urban Design Principle: Diversity	Desirable Values of the Attributes
Elaborative Attributes: Opportunity	The spaces, places and forms are designed to allow a variety of people to use and understand them in different ways at different times in different contexts. There is opportunity for people to experience and engage in a range of suitable activities. The public and private space network is appropriately designed to allow for bio-diversity and significant landscapes. Spaces, places and edges can be used for temporary uses such as markets, retail, promotional, services, education, arts and crafts and temporary buildings.
Choice	Spaces, places and forms are designed to offer a variety of sensory and intellectual experiences at different times and in different contexts that stimulate all the senses. Varied types of routes, views and environments to meet different needs. Socially mixed places with opportunities for different lifestyles. Buildings, streets and blocks are diverse in shape and size at human and walking scales. There is a visible and relational mix of activity areas and quiet zones oriented to provide places for people to have a choice of intensity of uses from taking part, to watching or being apart.
Supported	Spaces, places, edges, and forms add personal and social meaning and value to the experience of the user along the routes through and in the precinct. The walking routes have suitable places to sit, rest, read, eat, drink, shelter, shade, play, socialise, enjoy local amenities and views, access facilities and have travel options along them. Buildings along paths put eyes on the street and contribute to public safety and carefully transition public to private space. Traffic is integrated with activities by a network of spaces rather than a hierarchy of roads. Traffic has lower priority than walking and the minimum of space is allocated to traffic.

Opportunity to engage in preferred artistic, educational, employment, entrepreneurial, recreational, social activities. The **Choice** of spaces, places, and forms for a range of sensory experiences at different times and in different environmental contexts appropriate to their age, gender, culture, or income. All are **Supported** by places, spaces, edges and urban forms that contribute to personal and social meaning, allow opportunity and choice for different

activities using amenities, facilities and the specific attributes of a place. We now move on to the definition of the attributes of the urban design principle of human scale and need.

3.3.5 Human Scale and Need

The identified attributes of human scale and need are **Sociable** public spaces, places and edges to private spaces for all people to meet and interact at different times and in different contexts; **Safe** public and private places and spaces allow people to make sense of the place, feel secure and fulfil physiological and psychological needs and preferences. Human needs are met by **Attractive** attributes such views, vistas and panoramas of buildings, public landscapes and streetscapes that appeal to the individual's sensory perceptions. There are psychologically and physiologically stimulating places which are distinctive, interesting, surprising, delightful and inviting and encourage people to linger in them (Table 3.3.5).

Table 3.3.5: The Desirable Values of the Attributes of Human Scale and Need (Author 2011)

Urban Design Principle: Human Scale and Need	Desirable Values of the Attributes
Elaborative Attributes: Sociable	Public spaces, places and edges are designed to be welcoming for people to meet and interact. There are suitable places where people of diverse age, gender and cultural identity can gather for different uses at different times. Spaces and facilities cater for social activity, recreation and play for different age and gender groups.
Safe	Spaces, places and forms that allow people to make sense, feel secure, orient, and fulfil physiological and psychological needs and behaviours without unnecessary conflict with others. There is shade and shelter, toilets, and water for drinking and showers. Facilities and paths are suitable for those who have mobility impairment and they can access amenities such as views. Public spaces are busy, well lit and observable from adjoining buildings. Traffic is separated from public spaces for social and recreational activity. There are significant numbers of other people visible in the spaces, places, edges and buildings and some are doing intended activities of the purpose of visit or staying in place. Strategic buildings adjacent to public spaces such as corners or overlooking sites have active frontage and clear views into the public spaces. Alternate routes are available if a place is perceived as unsafe. Isolated places have a clear degree of oversight. Screens are transparent or latticed to be see-through or designed as a sculpture. There are visible security systems. Appropriate territoriality is built into the design of public and private space such as walkways past cafes, facilities and other publically accessible buildings.
Attractive	The landscapes, views and panoramas within and out of the precinct support the connection between people, nature and place. The attractiveness of the various visual elements of street furniture, buildings, and public art, natural and planted landscapes is varied, balanced and uncluttered. There is a degree of pleasantness of environments and an invitation to linger in particular places. The character of buildings provides a sense of local identity and richness of place through detail and visual quality. The overall level of stimulation, personal experience, interest in and use of places may be more important than individual aspects of beauty. Distinctive, fascinating, surprising, delighting aspects, views and vistas help create attractiveness.

Human scale and need is a wide-ranging design principle that reflects how people feel safe, comfortable and at ease within the public and private realms of the precinct. It also includes the physiological and psychological needs of identity and belonging and the ability to achieve self-actualisation and transcendence of preferences, desires and needs of the individual (Chapman 2002).

Human Scale and Need is also associated with suitable human dimensions of a walkable public space to enable an urban design analysis of the beach precincts. The way people perceive space and urban forms and the significant dimensions and senses people use to relate to, and attach value to, the particular environments found in the beach precinct will be the subject of Chapter Four.

3.4 Concluding the Politics of the Urban Design of Place

In order to clarify how well the spatial arrangement and urban design attributes in each type of precinct meet the expectations and preferences of users, we needed to select appropriate urban design attributes and characteristics of place that are aligned to the values attached to the beach precinct. This chapter has articulated and defined the attributes and characteristics of urban design that will be used to address the secondary research question: ‘What are the urban design attributes and characteristics of selected Gold Coast beach precincts?’

The chapter identified that different contemporary and historical political agendas have created different spatial and physical patterns of development to reflect the motivation and intent of foundational thinkers such as Ebenezer Howard, Frank Lloyd Wright and Le Corbusier. The patterns meet the intent of the authors in creating a ‘better’ place to live that articulate how society should organise its settlements from their political perspectives.

In this chapter we have also examined how the cultural practices of designing, planning constructing and governing the built environment are related to political positions of appropriate use of space, place and time of the dominant and project groups in society. These groups have created the urban form found in the Gold Coast beach precincts for their own purposes, preferences and functions (Bingham 1991; O’Connor 2004; Needham 2006).

Whether or not the interests of society have been met by the creation of the Gold Coast beach precincts is largely a function of economic and political processes (Dovey 1999). Physical evidence reveals that the interests of the dominant groups in society have been met to the detriment of the interests of large demographic, socio-economic and cultural sections of

contemporary society. The situation where a half of the beach precincts along the beachfront have little functional value to the majority of the city's residents is an example of this.

The role of the built environment professions of architecture and urban design and planning in the production of those places has largely been as project or resistance group identities (McGlynn 1993). In the course of their professional practice they have fulfilled the needs of the dominant identity groups in society. The political discourse that has taken place between the professionals and the dominant identity group is largely unknown, although it is likely that the relationship has been discursive and dominated by economic rather than social interests (Flyvbjerg 2004).

There has been a late 20th century reaction to the modernist, economic and governmental process of the production of place that was the dominant development paradigm from the middle of the 20th century. The property design professionals have begun to use governments to exert pressure on the property finance and development professionals to improve social outcomes (Bridge *et al.* 2011).

The property design professionals have also established project groups at global, national, state and local positions in departments of government and have used narratives surrounding public health and safety (Frumkin *et al.* 2004; Whitzman 2008), sustainable urban design from different perspectives (Farr 2008; Newman and Jennings 2008) and the intrinsic value of 'good' urban design (Carmona *et al.* 2001) to convince or influence decision makers to adopt their particular prescriptions for good design.

Every political movement needs key authors for the foundation and development of their ideas as a different political identity. The New Urbanists needed Jacobs, 1961, Calthorpe, 1993, Duany and Plater Zyberk 2000-03 and others to help direct and develop their responses to identified urban forms that they criticised to create aims and objectives they believed would produce a better world.

The problem with many of these movements is that their analysis becomes the solution to problems of urban form that they did not intend to address. They are often cherry-picked by others to produce design solutions they would not have intended to occur; in contexts with which they were not individually familiar and that produce unintended consequences in the urban form to which they are applied.

All the urban design and planning movements examined had a particular historical, economic, social and cultural urban context (Cuthbert, 2007). Their urban design and planning policies and guidelines all needed that context to make sense of the meanings they contain. The different movements varied through time and were reliant on the wider political and economic factors to become relevant for their application and support. Ebenezer Howard, Frank Lloyd Wright and Le Corbusier as visionaries of their fields all succeeded in altering the discourse surrounding the production of place and the ideas they proposed are revisited and reformed over time to produce new versions of their initial ideas.

None of the urban design guidelines examined was found to be a fit for the analysis of the Gold Coast beach precincts. This is largely because the guidelines were not intended to address the beach precinct as a particular urban pattern of development, which has morphological and socio-cultural values not found in other places.

Urban design guidelines are reliant on the identity of the place from which they originate. They are focused on characteristics of place that are considered undesirable and always set goals for the desirable characteristics of place to achieve socio-political objectives for a particular period in time. As such they are inherently unsuitable for application to the analysis of places that do not share those original characteristics of place (Chang and Huang 2008).

Some parts of the guidelines, however, are focused on characteristics of spatial and physical arrangement that were suitable for the beach precinct analysis to create good urban design values of place. These values are focused on activity and walkability and are found in varying degrees in all the different guidelines. Other guidelines are particularly focused on the governance and development of places to create desirable social or economic outcomes (UDAL Agenda 2005; LEED ND 2009; Urban Design Compendium 2007). Still others were focused on health and safety outcomes for the different demographic groups of society (Healthy Spaces and Places 2009; CPTED Qld 2007).

This chapter has established the urban design principles and the desirable characteristics of the attributes of those principles intended for the examination of the subsidiary research question ‘What are the urban design attributes and characteristics of selected Gold Coast beach precincts’. In order to employ these urban design principles we have to understand how they can be used to conduct a walk-through urban design analysis of the beach precincts. This will contribute to an understanding of how the chosen urban design solution, created by historical dominant cultural political practices, fulfils the preferences and values of different

contemporary users and groups. We now move on to conduct that urban design analysis of the selected beach precincts.

Chapter Four Describing the Urban Design of the Selected Beach Precincts

The human scale is never an absolute one: for it is determined, not alone by the dimensions of the human body, but by the functions that are facilitated and by the interests and purposes that it serves. Lewis Mumford (1961)

Having established the typology of the different types of urban beach precincts on the Gold Coast and selected the urban design principles to be used in the walk-through urban design analysis of the selected beach precincts, we now move on to establish the methodological approach to the urban design analysis of the beach precincts selected as representative and informative of the different types of beach precinct found on the Gold Coast.

The relationship between the urban design of the different types of beach precincts and their use and activity are, as Mumford (1961) observed, determined not only by human scale but by the functions, interests and purposes they serve.

This chapter reviews urban design and planning tools of analysis from the perspective of a walking user of the beach precinct for public space aligned to access to activity, amenity and facility. It will complete the design of an ‘urban design walk-through analysis worksheet’ (Appendix A) started in the previous chapter by the selection of the urban design principles of the study.

The urban design analysis of the beach precincts is intended to address the subsidiary research questions about the nature of the spatial and physical relationships, and the urban design attributes and characteristics of the selected beach precincts (Section 1.7). It will also inform inquiry into the preferences of the public who use the precincts and the professionals who design, plan and manage them.

In order to conduct this analysis of the different types of beach precincts found on the Gold Coast it was necessary to establish a suitable survey methodology. This methodology is based on an urban design analysis that employs the typology of urban beach precincts, and examines the spatial and physical relationships found there that enable people to meet the expectations, preferences and values for their use.

The walk-through analysis will be used to help determine the nature of the urban design attributes and characteristics of the key locations within the access form of the precinct. It will build an understanding of how the urban design of beach precincts create a responsive relationship from the built environment through the access form to the natural environment

and incorporates the different functions, interests and purposes of beach precinct visitation that people value in such inherently unique places.

This thesis is not interested in the morphological structure of a public space network where the intrinsic values of place are seen to arise from the buildings surrounding the public space and where the exterior spaces are a creation of the interior spaces of those buildings (Le Corbusier 1927). This type of architectural analysis is often linked to the narrative of public space being allocated to movement of ‘modes’ of transport that largely discriminates against non-vehicle use and activities (Lohan and Wickham 2001).

To describe the urban design of the selected beach precincts, the succeeding sections will connect the selected urban design principles to the analysis of the typological elements of the precinct by building the understanding of the following dimensions and functions of place:

- reviewing the methods employed by urban designers and planners to survey places
- examining the human dimensions of perception of the public space network
- focussing on the transitional corridors, locations and edges of the elements of the urban beach typology that facilitate access to the amenities, activities and facilities of the beach precincts.
- understanding the walking scale of urban form for understanding, movement, use and activity; and
- examining the nature of the restorative environment and public access to the activities and functions that can only be achieved in a beach precinct.

The chapter will progress to an urban design analysis of the selected beach precincts using the walk-through analysis of locations in the precinct. The urban design principles selected in the previous chapter will be applied, combined with an analysis of the requirements of a restorative natural environment. The chapter will conclude with a description of the way the different beach precinct designs affect the purposive and restorative use of those precincts.

4.0.1 Reviewing the Tools of Analysis for Walkable Public Space aligned to Activity

In this section the literature is reviewed to select appropriate analytical tools that determine the link between the design of urban beach precinct and activity and recreation that encourages social interaction in walkable communities. The methods and approaches examined may then be incorporated into the walk-through urban design analysis.

In order to carry out an urban design analysis of the beach precincts, it is necessary to review the methods that could be employed. Peter Hall (2002) conducted a literature review of the forms of urban and regional planning, and saw planning in general as an extremely ambiguous and difficult to define practice.

Different types of planners do very different types of work in different places under different circumstances. They are always redefining their work and hence their understanding of it. This practice of reiteration may also explain the many different ways of analysing spaces and places that exist in the built environment professions. Hall (2002) rationalises the definitions of planning to be either what planning does or how it does it. Hall (2002) considers planning to be a rational and general activity intended to achieve an orderly sequence of actions that will lead to achieving stated economic, social and environmental goals.

Examining the forms of urban, regional or town planning, Hall perceived the objectives of planning activity as providing for a spatial structure of land uses (or activities) that would achieve better outcomes than no planning at all. The spatial nature of the activity is best articulated through the production of spatial plans that progress from general or diagrammatic plans of regions and towns to detailed blueprints for precincts or buildings (Hall 2002).

Hall (2002) attributes the sequence of 'survey-analysis-plan' as originating with the work of Patrick Geddes that influenced the Town and Country Planning Act of 1947. This act set out an approach and methodology for planners to conduct periodic five year reviews of the existing nature of land use and development. Hall also drew attention to the different faces of planning that are related to the different intents of the plans and found they compared with the different aspects of the subject Geography. Hall (2002) argued that planning is essentially human geography in its different aspects such as social, economic, political, psychological and cultural.

The dominant planning sequence of the 'survey-analysis-plan' method is described by Hall (2002) as being 'goals, continuous information, projection, alternative scenario simulation, evaluation, choice, continuous monitoring'. This planning sequence can be seen as another iteration of the rational design process used in other design professions, such as industrial design (Dorst and Cross 2001), architectural design (Demirbas and Demirkan 2003) and engineering (Helms, Swaroop and Goel 2009).

The planning sequence described by Hall (2002) relies on spatial and cadastral surveys that are analysed in offices to draw plans, devise schemes and policies for land use and building types. A criticism relevant to this research is the one Hall levels at physical planners claiming that they see the problems of society in physical terms that have a spatial solution but that this approach does not allow for solutions that may be non-physical in character. Hall also thought that this approach may blind planners and policy makers to simpler, cheaper, social, technical, or governance solutions (Hall 2002).

The Virtual Perspective of Spaces, Places and Routes

The link between perception, walking movement, activities and meaning of place was investigated by a group from Napier University, Edinburgh, Scotland (McCall *et al.* 2005). The group investigated the virtual perspective of space for the development of virtual gaming environments to improve the users' online gaming experience. The research sought to understand the critical aspects of spaces that result in them being perceived as places. They identified and utilised the concepts developed by a number of writers on urban design, including the guidelines for responsive environments of Bentley and colleagues (1985).

The research group drew connections between the perceptions people have of the real world to improve the constructed experience of the virtual world. The proposition that guides this work in the virtual or mediated environment is that presence is a subjective experience of place, even when a person is physically present in another space, as set out in the mental mapping exercises conducted by Lynch (1960). They identified the role that paths play in nearly all of the properties of the responsive environment and attributed this to the mental images that people possess of places (Appleyard 1970).

The researchers identified that places are likely to be defined by the activities people undertake, the meanings they attach to specific locations and the physical properties present of those spaces (Tuan 1977). They also found that the illusion of non-mediation was strongest if the presence in the virtual space was supported by co-presence of location with others in a social and physical presence (Ijsselstein and Riva 2003). The researchers validated the idea that environments, which are responsive to the needs of the user, exhibit a stronger sense of place than those which are not responsive, and that visual appropriateness, paths and legibility help people to identify the permissible uses of the space.

If it is possible to improve the experience of a virtual world using the identified attributes of urban design in the real world, this tends to confirm the validity of the attributes used to construct the inquiry into virtual spaces. It also emphasises the relationship between perception, walking movement, activities and meaning of place used in this research and validates a similar approach to researching the beach precincts of the Gold Coast. In order to understand this relationship, we now turn to examining how people perceive spaces and places.

4.0.2 Perceptions of Space and Place

It was expected that the urban design analysis would show the way people perceive and experience the spaces and places of the beach precincts and will be related to the inherent values of beach precincts. The visual and physical connection to the natural environment of the foreshore, beach and ocean and the nature of the transition from urban to natural environments, through the access form, heighten the experience of the restorative environment (Kaplan, Kaplan and Ryan 1998).

Edward Hall (1966) discusses the territorial spacing mechanisms, biologically inherent in people. Hall does not specifically define exact distances at which people will tolerate others or accommodate to their presence due to the variation in cultural modification. However, the ranges of variables that operate in determining levels of tolerance are related to individual, environmental and cultural differences and in the individual's intensity of perception at different distances that the visual, audio, olfactory, taste and tactile senses begin and end (Hall 1966).

Hall (1966) describes the human dimensions that relate to building an understanding of how people perceive spaces. These are different types of thermal spaces where people seek shelter and shade from temperature and climate extremes; visual spaces, where people are able to observe what is happening around them; auditory spaces, where people can adapt to the acoustic signals and cues of the social environment; olfactory spaces, that help people to identify objects and subjects in their proximity and tactile spaces where people are able to feel their local and immediate environment (Hall 1966).

All these sensory spaces are, of course, interrelated and contemporary with the individual's changing physical and social environment. However, in combination, the sensory spaces are probably fundamental in determining the way people perceive or feel the existence of places

within spaces. They also assist individuals to identify sources of food, drink, opportunities for social interaction, possible physical dangers and social challenges and to interpret the obstacles and opportunities in the environment for social intercourse through a language of space (Ovstedal 2008).

Hall (1966) proposes distance ranges at which social interaction is regulated. The 'intimate' distance from physical contact to about 0.45 metres is where people can feel uncomfortable in the presence of strangers, particularly if people are moving quickly or suddenly past someone. The 'personal' distance ranges from 0.45 to 1.2 metres and is the space where people are just out of reach. It is the distance at which people will feel comfortable talking to people they consider familiar. The 'social' distance ranges from 1.2 to about 3.65 metres and is the distance at which people conduct impersonal social transactions, where visual and auditory perception is perceived as normal.

Hall (1966) then identifies a variable and subtle transitional distance where social distance becomes public distance. This distance was assessed as outside of the circle of social involvement. Hall described the 'public' distance ranging from 3.65 to beyond 7.6 metres. At this range conversation is loud but not at full volume and visual definition of other people begins to fade from the fine detail of social distances. The non-visual senses at public distance are at, or beyond, their natural limits, the voice has to be raised and words enunciated clearly. Physical gestures also need to be amplified to communicate with others.

Gehl (2010) has built on the observations of Hall and others in terms of the 'Human Dimensions' in the design and planning of places. This may also arise from Gehl's training as an architect, as the use of anthropometric data is common in the design fields that create objects to be used by people. For example buildings, fashion, furniture, industrial design, jewellery and many other design fields use anthropometric data to enable them to design their products, aligned to standardised human dimensions related to age and gender.

The natural starting point of designing urban form is considered to be human mobility and human senses, as they are the basis of activities, behaviour and communication in urban space (Madanipour 2003). Gehl (2010) describes people as 'linear, frontal, horizontal mammals with a maximum walking speed of five kilometres an hour'. The senses are classified as being either 'distance or close senses', with sight as the dominant sense in most people. The key visual and other sensory distances related to the ability to discern what others are doing at different distances are described by Gehl (2010) as:

- Within 7 metres we enter the realm of public and social distances described by Hall. Visual detail and verbal communication improve as people get closer to each other and the senses of smell, taste, and touch come into play.
- At about 22 to 25 metres people can discern facial expressions and dominant emotions and can start verbal communication.
- The ‘theatrical distance’ of around 35 metres is the limit for people to attune to exaggerated gestures and dominant emotions.
- Around 50 to 70 metres is the limit for the ability to recognise gender, hair colour, and identity along with loud shouts and orders.
- Up to about 100 metres the movement and body language of other people is visible. This is also a key distance for watching spectator events and Gehl refers to this as the ‘spectator’ distance.
- People are identified as people, at about 300 to 500 metres (Hall 1966, Gehl 2010).

In summary, Hall (1966) and Gehl (2006, 2010) describe the transitions between these different sensory distances as the underlying mechanisms of social interaction in urban forms. The implication of the human dimensions is that the design of public spaces depends on the organisation of space to appropriate human sensory distances (Madanipour 2003).

The distances described along with their meanings and implications were considered in the construction of the ‘walk-through analysis’ (Appendix A) and included in the considerations of the field observations by the researcher. Through an iterative process of conducting the field observations and assessing distance ranges in the field, the following distances were adopted for walk-through urban design analysis and field observations:

- The ‘Locality’ or ‘Location’ is the main unit of urban design analysis in this thesis and its meaning is the area immediately around a specific location or observation point up to about 35m or the ‘Theatrical’ distance.
- The ‘Spectator’ distance of 35 to 70 metres is not used to record observations of movement or activity, because although gender and familiar people can be recognised, the distance range becomes too coarse to be reliable. This distance can be used to record the presence of people, facilities or activities during the urban design analysis.
- The ‘Distant’ range of 70 to 500 metres can be used to determine the nature of buildings and the degree of distant activity or the presence of facilities in the urban design analysis. It may be used to generalise distantly visible places.

- The distance to the 'Horizon' of 500 metres plus was only found to be of use in describing the type of views from an observation point and the extent of the surrounding environment.

The mind tends to fill in what is beyond the immediate locality from its previously acquired knowledge of places beyond the location. However, in this urban design analysis a deliberate effort was made to focus on the area up to 35m from the selected observation point first, the spectator distance of up to 70m beyond that and lastly, the characteristics of the precinct related to what was visible at the location.

This approach to the analysis of the urban design of the beach precinct helps to create a sensory and social understanding of urban spaces and places (Hall 1966; Madinipour 2003; Gehl 2006, 2010). Adopting human scales of perception helps to build an idea of how a visitor would discriminate the identity of space and place as they physically experienced it. This is in contrast to a cerebral understanding the location of objects on a map devoid of physical, spatial and sensory experience, as is often the case when architects, urban designers and planners objectively and rationally analyse urban spaces and places (Adams *et al.* 2004).

4.0.3 The Walking Scale

Walking is an activity that transitions effortlessly into other activities and walkers can easily change direction or speed. Walking can be attentive and purposive or non-attentive and exploratory. Walkers are in constant connection of choice with their environment through their senses in a range of distances and scales. As such, they are sensitive to the nuances of the signals they get from other people and the environment - dependent on their degree of attention. However, most people can usually switch their degree of attention easily in response to stimuli (Adams *et al.* 2004).

The degree of stimulus is important as it affects the quality of the walking experience. People prefer pleasurable and attractive environments with a minimum of conflict with others (Lake *et al.* 2007). They also prefer having room to walk, unhindered by others getting in the way, intruding into their personal space, pushing or shoving them. These negative social-environmental factors apply particularly to women, the young and old (Gehl 2010).

Gehl (2010) asserts that architects and planners have developed confused practices that analyse space from a vehicular perspective. This does not allow for the transition from driving to walking but continues vehicle spatial dominance into walking spaces. This can be

seen in the Gold Coast where shopping centres pay attention to walking scale within the pedestrianised shopping area, particularly for movement. However, this concern for a walking scale abruptly ceases in the parking lots that surround the shopping centre.

Where this thesis diverges from Gehl's approach to urban design is that it is considered inappropriate to conflate walking and cycling as an active transport focus for an urban design analysis of walkable places (Gehl 2010). A walking scale is the most appropriate for all human needs, whereas cycling is a minority mode of transport. Cycling speeds and pathway requirements can also adversely affect the identified social and restorative benefits of beach precincts for relaxation.

People also appreciate interesting detail when walking that cannot be easily observed when jogging, cycling or driving. Hall (1966) indicated that when walking, the desirable balance of too few to too many stimuli is considered to be around every five seconds. This period of time translates to about five to six metres at normal walking speed.

We now move on to review some of the available walkability checklists of urban places in order to focus the research on the identified characteristics of a walkable environment that could be incorporated into the walk-through urban design analysis (Appendix A).

4.0.4 Urban Design as a Walkability Checklist

Neighbourhood walkability checklists have been generated by governments and health associations as tools of analysis by the 'Healthy Cities' movement. In the United States, the Partnership for a Walkable America and other agencies produced a checklist designed for communities to assess their local areas for walkability and report on them to local government (Partnership for a Walkable America 2012). In Australia, the Heart Foundation has produced a neighbourhood walkability checklist to assist the walking groups it promotes and supports to inform local governments of the condition of the routes they use (National Heart Foundation of Australia 2011).

These walkability checklists are part of government strategies to engage and encourage the community to assess the nature of walkability in their neighbourhood and report back to their local government agencies. This strategy aims to raise awareness of the importance of walking to maintain individual and community health. They are intended to create an understanding of the features of a walkable neighbourhood amongst targeted demographic

groups in the community, identified as having particular health risks from low levels of physical activity, such as the young and old (Department of Health and Ageing 2010).

The checklists are based on a large body of research generated by the healthy cities movement that correlates incidental walking to improved health outcomes for the community as a whole (Thompson Coon *et al.* 2011). The 'healthy cities movement' is connected to the narrative of public health and urban design (section 3.2.1). It is proposed by advocates of the movement that the design of cities can create conditions for people that range from hazardous to healthy, directly correlated to the urban fabric and infrastructure of the city (Kenzer 1999).

In the past, the connection between the city and health has led to infrastructure initiatives such as water and sewage treatment systems, the parks and playgrounds movement (Hall 1988). Most recently the connection between public health and urban planning has resulted in the promotion of active transport on the Gold Coast (Gold Coast Physical Activity Alliance 2010). The checklists were examined to identify the methodology, characteristics and ratings used in them to report on the degree of walkability of urban places that could be applied in the analysis of urban beach precincts.

An American Walkability Checklist

The American walkability checklist is a simple rating system that asks five questions and uses a seven point scale to rate the responses (Partnership for a Walkable America 2012). It is aimed at parents with children who are starting to walk to school, visit friends and access recreational opportunities. On answering the questions, the parent is directed to appropriate personal and community responses to the walking routes they are assessing. The questions relate to the condition of the pathways, the ease of crossing streets, the behaviour of drivers they encountered, the ability to follow safety rules for the child and the pleasantness of the walk.

The usefulness of the checklist to an urban design analysis is that the checklist actually deals with some of the practical aspects of walking a route with a child. It focuses on characteristics of the urban environment that do not seem to feature much in urban design guidelines but which are relevant to the layout and provision of infrastructure supportive of walking and the governance of public places.

The identified characteristics that hinder and deter walking as an activity include blocked, broken, irregular footpaths that are too frequently interrupted by traffic intersections and

those making walkers wait too long to cross. It also considers adjacent traffic that moves too fast or does not yield to walkers, and drivers backing out of driveways without care. There is a rating of the governance of public places by the aesthetic qualities of the street, the presence of litter, dogs and lack of lighting. The walk-through analysis of the beach precincts will incorporate some of these restrictions on walkability into the analysis of governance attributes as they are common to all urban places (Partnership for a Walkable America 2012).

An Australian Walkability Checklist

The Australian walkability checklist is aimed at the walking groups the National Heart Foundation supports (National Heart Foundation of Australia 2011). Like the American checklist, it has a simple format and includes a reporting to council element. It has four categories of question, with a yes or no answer, that are more open to interpretation than the American checklist.

The categories used in the checklist are ‘walker friendliness, comfort, safety, convenience and connectedness’. The questionnaire however suffers from poorly aligned questions and the use of urban design jargon that appears to be for collecting data from the lay public. The questions are ambiguous, poorly phrased and open to interpretation. The Australian walkability checklist appears to be written by planners for planners who are familiar with the literature on healthy cities.

An example of this is found in the question ‘Are pedestrian lights or zebra crossings conveniently located with schools, parks, retirement homes, shops?’ This question is unlikely to produce any useful data from a yes or no response, as, if they are not convenient, the respondent has no opportunity to explain and inform the question. The colocation of these urban elements in a small area is also very unlikely in most Australian suburbs. People’s definition of the key term ‘convenient’ is likely to be too variable to be useful, unless the respondent has a good understanding of the context of spatial mobility.

The National Heart Foundation (2011) checklist appears to have many of the right concerns and ingredients for a person walking a route. However, it has been formulated and phrased in a way that is confusing and conflicted for respondents unfamiliar with urban design theory and the active living literature. As a list of characteristics of a walkable place, the checklist was useful but not directly applicable for this research in its current form.

Walking Plans for London

Another walkability guide examined appears to have antecedence in the architecture and planning literature of the United Kingdom that produced the Urban Design Compendium 2000 (Price *et al.* 2005). Sponsored by Transport for London (TfL), it is intended for an audience of local authority officers, elected members, developers and others associated with new developments in London, England. The English tradition of urban design guidance is often concerned with the development or redevelopment of sites that respond to existing developments in an urban context that has a constituency of design, development and governance professionals (Bentley *et al.* 1985).

The intended objectives of the guide are linked to achieving the policy and planning outcomes of a raft of existing documents such as ‘The Walking Plan for London’ (Transport for London 2004), ‘Towards a Fine City for People’ (Gehl Architects ApS 2004), ‘Streets for All’ (English Heritage 2000) and the subsequent ‘Manual for Streets’ for residential streets and the ‘Manual for Streets 2’ for urban and rural contexts (Bradbury *et al.* 2007). The guidance given in these documents is textually similar to the Urban Design Compendium. It also relies on elaboration of the desirable qualities of walkable places in selected case study examples to guide decision making and planning.

The ‘Towards a Fine City for People’ report commissioned by Transport for London has a convergence with the intent of the research in the beach precincts, where it seeks to incrementally improve the public spaces of the city for walking and public life of specific locations (Price *et al.* 2005). The report identifies the need to create a better balance between traffic, cyclists and walkers and conditions for activity and restoration in an aesthetically pleasing environment (Gehl Architects ApS 2004).

The report also lists the characteristics of a desirable walking environment as functional, as in travelling, exercising and shopping; recreational, including walking for pleasure and sight-seeing; and social, such as sitting, relaxing, reading, watching, and talking. These characteristics will vary from place to place with some places being more conducive to particular walking and social activities than others (Gehl Architects ApS 2004).

The report also considers walking in London to be largely functional and that public space is not generally designed for recreational use outside the city parks. The perception of public space as intended for movement and function may be due to a dominant transport planning

bias in the report. It is dependent on a particular perception of walking as a transport activity by people using public space to transition between activities (Gehl Architects ApS 2004).

Surveys of walking conducted for the report also indicated that, in some places in London, up to 96% of all pedestrians are between the ages of 15 to 64. The surveys also observed that there are few children or elderly people using the streets and there is limited accessibility for those with mobility impairment. The report mentions these facts and conditions without any plausible reasoning for the absence of important demographic groups who may have little option but to walk, and yet appear to be excluded from public spaces.

The report identifies the issues that it believes need to be addressed for the city, its places and in the detail of its public infrastructure. These issues include the dominance of traffic, poor siting of crossings that do not meet walkers' preferences, overcrowded, interrupted pathways, staggered crossings, subways, bad lighting, unattractive frontages, guard railing that herds walkers, cluttered and poorly sited street furniture, lack of seating and of universal access (Gehl Architects ApS 2004).

The context of the 'Improving Walkability' guide (Price *et al.* 2006) is specific to London. The compactness, diversity and activity patterns found in London are not the same as on the Gold Coast. The assessment tools in the Transport for London 'Improving Walkability' guide (Price *et al.* 2006) are descriptive rather than proscriptive, and aspirational rather than intentional. The guide adopts the five Cs of good walking networks as Connected, Convivial, Conspicuous, Comfortable and Convenient for the analysis of walkability.

This tendency in the urban design literature to try to communicate the desirable attributes of the urban design elements by catchy phrasing is unhelpful in developing good urban design guidelines. The contemporaneous 'New Zealand Urban Design Protocol' (NZUDP) for instance, uses the seven Cs of Context, Character, Choice, Connections, Creativity, Custodianship and Collaboration to describe key urban design qualities (Pirrit *et al.* 2005).

The strategy adopted by TfL to improve walkability incrementally, place by place, would appear to merit consideration as part of developing an overall strategy to improve walkability in beach precincts. However, the focus on walking for transport fails to provide for the influence of the environment on walking for recreation and pleasure (Humpel *et al.* 2004).

A number of the descriptions of preferred or desirable characteristics of a walking environment in the guide were incorporated into the walk-through analysis (Appendix A).

4.0.5 The Restorative Natural Environment

Attitudes to public health on the Gold Coast and values in society have changed from the period of initial development of the Gold Coast beachfront suburbs. The identification of car dependent sprawl as a key risk factor in the obesity epidemic in the developed world is now a key concern of public health professionals (Ewing and Schmidt 2003). There has also been a corresponding change in attitudes towards the natural environment with a new recognition of the positive health benefits of contact with nature for the physical and mental health of communities (Kaplan 1995; Krahnstoeber Davison and Lawson 2006; Evans *et al.* 2007; Sallis *et al.* 2009).

The different levels of Australian government are all engaged with policies and programs to encourage physical activity, especially in attractive, safe, walkable and natural environments found in such places as the beachfront parks, green streets and other natural places (Frank *et al.* 2005; Cohen *et al.* 2007; Saelens and Handy 2008).

The public health aspect that is considered central to the relationship between people and beach precincts is the positive effect that connection with the natural environment has on mental health resilience. Kaplan (1995) attributes the benefits of that connection as arising from the restorative influence of nature on the capacity to recover from stress. Kaplan explains that stress is invoked in common usage in a variety of circumstances and distinguishes between stress that is caused by anxiety, frustration, and other physical and mental conditions, and stress that arises from attentional fatigue (Kaplan 1995).

The connection between involuntary attention and the process of restorative effectiveness, for which natural environments are particularly suited, is elaborated as having four requirements. Kaplan (1995) details how natural settings are most likely to meet the four requirements of a restorative environment as: ‘being away, fascination, extent and compatibility’. These requirements are re-interpreted for this thesis, and set out below as:

Being Away: Kaplan (1995) lists the seaside, as a preferred restorative environment and idyllic destination. Other idyllic destinations include mountains, lakes, streams, forest, and meadows. For most Gold Coast residents and visitors nearly all these destinations are within a half hour drive. This emphasises the importance of the accessibility and governance or stewardship of beach precincts for the purpose of a public health resource. For Gold Coasters, ‘being away’ can be a reality whilst staying put, if the access to the natural environment suits

the other requirements of a restorative environment. 'Being away' also implies that many of the things that are taken for granted in the design of streets in other urban contexts may not support a sense of 'being away' in the beach precinct if they are not oriented and organised to enable the experience.

Fascination: Kaplan (1995) considers the fascinations of the natural environment to be found in its objects and processes: horizons, beaches, trees, headlands, bays, waves, sunrises and sunsets, changing views and vistas. These are all elements of the urban design principle of diversity and differentiate the different beach precincts. Accessibility to the diverse elements of the natural environment is related to the spatial orientation and design of the beach precinct and its function as a gateway to nature. That there should be fascinating approaches from the built environment and opportunity to experience the natural environment through involuntary attention, without the need for directed attention found on urban streets, would appear to be a self-evident axiom for beach precinct urban design.

Extent: Kaplan explains that, in the wilderness, 'extent' is a natural property of the environment but it can be reproduced in smaller more managed environments. Pathways can be designed so that even small areas seem larger. Enclosure of vistas and the miniaturisation found in Japanese gardens can create a sense of coping, as well as connectedness. Kaplan also identifies settings that include cultural or historic artefacts as being able to illustrate connectedness to past eras and environments, and in turn to a larger world. 'Extent' could also be included as a descriptive tool of analysis of the urban design characteristics of the beach precincts as part of the human dimension of the spaces of the precinct. In using 'extent', the differences between different but similar spaces may be explained and understood.

Compatibility: Kaplan assigns a special resonance between people and the natural environment and claims that people need less effort to function in a natural setting than in their more usual familiar urban setting. Evolutionary processes are related as producing purposive use of place to fulfil patterns of activity that converge with the functioning of the senses to achieve those purposes. This convergence of evolutionary development of the senses and a compatibility of the patterns of preferred activity with the experience of places in a natural environment fulfils a natural match of activity, perception and place. In this thesis, 'compatibility' has been adopted as the degree of fit between expectation and preference to experienced behaviours. Kaplan also states that even short stays in a restorative environment

have an extended peaceful effect and that an accessible natural environment can provide most people with a compatible context for purposive visits.

The four requirements of a restorative environment, as described by Kaplan, would appear to provide theoretical underpinning for the methodological approach adopted in this thesis. The use of Kaplan's requirements of a restorative environment - being away, fascination, extent and compatibility - in an urban design analysis, provides an opportunity to qualitatively analyse those properties of place that allow people to restore their connection to nature, improve mental and physical health, and relax.

Using Kaplan's requirement should assist in identifying and describing what place attributes and characteristics are associated with restorative places and would appear to be contextual to the different types of place and their degree of attractiveness inherent in places from a cultural, historic, recreational or panoramic perspective (Hidalgo *et al.* 2006). Using them as part of the urban design analysis is expected to help explain people's preferences for spatial and physical attributes and characteristics of place for activity, relaxation and restoration. We now go on to the design of the walk-through analysis.

4.1 The Walk-through Urban Design Analysis of the Gold Coast Beach Precincts

The walk-through urban design analysis (Appendix A) has been designed to describe and identify how well the urban design, spatial and physical characteristics of the beach precincts meet people's psychological and physiological needs for activity, recreation and connection to the natural environment of the foreshore, beach and ocean, in accordance with the intent of the research questions (Section 1.7).

The walk-through analysis is the foundation of the urban design analysis of the beach precincts in this thesis. This urban design analysis is designed to be complementary to the typological analysis of chapter two and later field observations of movement and activity conducted from the same observation points. The use of the same type of observation point in each precinct allows comment on, and comparison with, the urban design of each precinct.

The walk-through analysis was partly conducted by the researcher in conversation with young and adult female family members in order to incorporate diverse age and gender objective and subjective perceptions to improve the plausibility of the subjective observations included in the urban design analysis.

The walk-through analysis is not wholly conducted in the traditions of urban design and planning, but borrows from the practices of archaeology. This is because archaeological practices have been developed to collect information on the location, patterns of distribution and organisation of historical cultural practices and activities (Banning 2002) and this thesis is interested in the contemporary cultural practices and activities associated with particular places.

The main field survey methods developed in archaeology include intrusive or non-intrusive, extensive or intensive, purposive and sampling surveys, field-walking and transects. The aim of these surveys is often to answer questions about the way people allocated, organised and valued those cultural practices and activities in particular places (Balme and Paterson 2009). The major contextual difference between the methods employed in this thesis and archaeological practices is that this thesis is examining visible contemporary artefacts and archaeologists are usually examining buried, altered, hidden or obscured historical artefacts.

The spatial arrangement of artefacts that support cultural activities and practices are revealed in archaeology through the use of extensive mapping methods. These methods map out the location, nature and importance of artefacts that support those cultural practices and activities and reveal the degree of importance that society accorded to them (Banning 2002).

The use of aerial photography and geospatial information systems is used in this thesis and by urban planners. However, land use planners tend to be focussed on specifying land use, creating building permissions, engineering transport routes and the provision of public infrastructure. This research is more focused on the relationship of public and private spaces and places that allow cultural practices and activities.

As in archaeological practices, the narrative of cultural activity in this research is informed by an intensive survey of key cultural artefacts by purposive sampling surveys. These observational surveys concentrate on the key transitional locations that were determined from the urban beach typology, to reveal the patterns of distribution of activity allowed and encouraged by the organisation of public spaces, places and pathways.

4.1.1 Designing the Walk-through Analysis

The walk-through urban design analysis (Appendix A) has been constructed by merging elements arising from the literature review. These are the urban design principles selected for the research (section 3.3) and the sections dealing with the human dimensions of perception

of space and place, the walking scale of urban form and the concerns of the walkability checklists explained earlier in this chapter.

The urban design analysis was conducted from the key typological transitional locations of social node, beach access point and intersections or form change of the access form to the principal built form, located along the traverse and transects pathways identified in Chapter Two. The walk-through urban design analysis gathered information on the design characteristics of the beach precinct that enable or hinder use or activity in the beach precinct.

Mapping the important amenity of shade was problematic for this survey of the amenities and facilities found in the different beach precincts. The reasons for this difficulty include defining the extent of the canopy and the movement of the sun and resultant shadows during the course of the day. Although most shade trees in the sub-tropical Gold Coast beach precincts have a canopy all year round, it is recognised that in other places this will change with the seasons.

Considering that shade is so variable, it was decided to record the shade in the different beach precincts by their descriptive values. Activities like walking need shade along routes. Children's playgrounds need shade that can shade and shelter children playing. The Council does use trees and artificial canopies for the purpose of providing shade related to activity in some cases, but not consistently. The descriptions of the provision of shade were recorded as: no shade, limited shade, shade in the wrong place, shade where needed and fully shaded.

The GCCC has been renewing and renovating beach precincts as part of planning for Gold Coast beachfronts and continued to do so after the survey (Gold Coast City Council 2012a, Gold Coast City Council 2013c). This means that any changes that are made in the location and type of public infrastructure subsequent to the observations were not considered. This situation may also apply to tree and vegetation plantings. The width of the beach and eventually the beach dunes and access points may change from the recorded observations due to erosion, weather events and public works.

This urban design analysis sought to identify what the experience of a walking visitor to the beach precinct might be. It was conducted in a way that relates to how people interact with the different places in the beach precincts of the study. It examined what they can do, how they can understand the places and spaces, where they can go, how safe, comfortable, enabled and supported they might feel, what choices and opportunities were visible to them and the

ease with which they could navigate and utilise the public spaces, amenities and facilities in the precinct.

Approximate distances adopted for the analysis descriptions were 'Theatrical': 0 to 35 metres; 'Spectator': 35 to 70 metres; 'Distant': 70 to 500 metres; 'Horizon': 500 metres plus. The distances are also measures of approximate walking times of 30 seconds to walk 35 metres and 1 minute to walk 70 metres (Knoblauch, Pietrucha and Nitzburg 1996). Unless stated, the walk-through analysis reports on the characteristics of place found in the immediate location. Data was collected through observation under the following categories:

1. Activity and facility: the number and characteristics of people visible from each observation point in the immediate location, within spectator distance and distantly visible. The incidence of movement activity, public space activity and beach specific activity observed within sight of the observation point, the facilities visible and the rating given for the degree of shade available. The 'activity and facility' observations were incorporated into the analysis of the urban design principle of 'governance'.
2. The Restorative Nature of the Environment: empirical observations of Kaplan's relationship of people in preferred natural environment of 'being away' assessed as how distinctive or idyllic the immediate locality is and how it rates as a restorative environment, how fascinating the place was and how tempted to linger the researcher was; how compatible the place was as somewhere to relax, watch others, enjoy the views, and the degree of connection to nature. The preceding observations were incorporated into the analysis of the urban design principle of 'human scale and need'. The observations of the extents of the views were from the observation point in the immediate and distant localities and the horizon if visible were incorporated into the analysis of the urban design principle of 'accessibility'.
3. The Selected Urban Design Principles: empirical analysis of the attributes and characteristics of the 'governance' of locality to support walking; the 'accessibility' of amenity and facility in the public space and 'openness' of the private and commercial built edges of the visible public space; the 'diversity' of recreational or social public spaces and the nature of the public spaces and infrastructure to support intended use and extended universal stay in the location; the 'human scale' of the public spaces and the nature of the built edges of those spaces; the existence of attributes which meet 'human needs' and make public spaces and built edges 'safe' and 'attractive'.

The walk-through urban design analysis was conducted at the chosen observation points in the precinct to collect verifiable empirical information in order to create an understanding of the nature of the attributes of a walkable place. These observations of activity, amenity and facility on, along and adjacent to the walking routes are then incorporated in the analysis of the urban design principle of governance at the key locations in each of the beach precincts.

The following sections report the findings of the walk-through urban design analysis of the selected precincts and the transitional locations within those precincts. The observations have been organised to report on an examination of governance for walking; the degree of visual connection and the extent of the views from each location; the nature of the public infrastructure to support diverse activity and the nature of the transitional locations to the restorational environments.

4.2 The Governance of Walkability in the Beach Precincts

The state government of Queensland (Queensland Government 2012) and the Gold Coast City Council (GCCC) (Gold Coast City Council 2014a) permit cyclists and other wheeled, personal vehicles to travel along all footpaths in the beach precincts along with people walking, jogging and pushing prams.

Shared Paths and the Oceanway

Shared pathways have been permitted and encouraged by the GCCC although they have the option to pass by-laws that restrict cycling in particular places. This situation is found in the coastal City of Cairns in North Queensland, where cyclists are required to dismount in public spaces where cycling conflicts with high pedestrian traffic and social usage associated with activity and amenity, in a city that relies heavily on overseas and interstate tourism (Figure 4.2a)(Tourism Queensland 2013).

The use of shared paths as an active transport policy narrative is firmly embedded in the professional (Planning Institute of Australia 2009b), institutional (National Heart Foundation of Australia 2011) and activity (Australian Bicycle Council 2013) policies and programs. The narrative relies on research linking health outcomes to the nature of the built environment to promote active transport as a solution to public health problems.

The policy narrative of shared paths as active transport appears to be founded on the proposition from the US Surgeon General (Centers for Disease Control and Prevention 1996)

that 30 minutes of moderate exercise each day, including brisk walking, could be as important in limiting disease risks as not smoking and a healthy diet. This finding encouraged the concept of incidental exercise as an effective public health response if physical activity could be incorporated into the habits of daily life, such as walking to catch a bus.



Figure 4.2a: The Cairns Foreshore Pathway (Author 2012)

The underlying rationale of cycling being an unalloyed good for everyone and society is used in promoting the Oceanway and shared paths (Gold Coast City Council 2014c). However, the need for walking to maintain quality of life in an ageing population (Sugiyama and Ward-Thompson 2006; Sugiyama, Ward-Thompson and Alves 2008) and walking as an important factor in maintain mobility for people from the age of 45 onwards for women and men (Feskanich, Willet and Colditz 2002; Feskanich, Flint and Willett 2014) is conflicted by the shared path policy.

Making all paths shared as a transport policy is understandable with the accident, injury and death rates amongst cyclists on the roads (Jensen 1998). However, allowing cyclists to use shared paths will probably result in shifting the burden of risk towards walkers and, particularly, older walkers (Chong *et al.* 2009). There is also no consensus amongst researchers as to whether shared paths in general urban settings have an acceptable risk of conflict and injury amongst the different groups of users (Grzebieta, McIntosh and Chong 2011) This casts doubt on the wisdom of applying shared path policies to foreshore parks.

The cyclist pedestrian studies that support shared path use were conducted in the context of streets and roads in urban or rural settings (Johnson and Bruton 2009). However, none could be found that studied the effects of walker-cyclist conflict in places with high social activity that include people using facilities and accessing amenities in public spaces, as is found in foreshore parks. Kelly et al (2011) noted that Hillman and Whalley (1979) had observed that ‘in transport policy and practice, walking had been overlooked or, at least, inadequately recognised’. Kelly et al (2011) also commented that ‘pedestrian provision is often poorly thought out and planned’ (Hillman and Whalley 1979; Kelly *et al.* 2011).

Mees and Groenhart (2012) hypothesised that there is a correlation between increased cycle traffic on shared paths and a reduction in walking as an activity, and that cycling on shared paths is a deterrent to the recreational and restorational use of foreshore parklands that disproportionately affects young children, women and older people (Cairney *et al.* 2000).

It is also of interest that the most at-risk groups identified in the literature are young children, women and older people who are also less likely to be cyclists (Chong *et al.* 2009). Older people, in particular, may have impaired sensory facility and or a degree of immobility that will make them particularly sensitive to the near-miss encounter with cyclists, especially due to the fright factor of being approached suddenly from behind or being startled by a bell.

Older people are reportedly more sensitive to the possibility of crime or an accident than other groups and need to be assured of their safety (Jensen 1998). This assurance is unlikely in a shared recreational environment with cyclists where any accident with a cyclist is more likely to result in serious injury to the elderly walker. Older walkers demonstrate their awareness of the risk of severe injury in collisions with cyclists, by being more likely to move off the path to avoid cyclists than any other demographic (Johnson and Bruton 2009). There is also a likelihood of the accumulation of negative experiences of cyclist-walker accidents amongst older people personally or by acquaintance (Garrard 2013).

Walkers are much more likely than cyclists to suffer serious injury in collisions between the two, and women walkers are more likely to be injured than men (Jensen 1998). This risk rises with speeds beyond 20 km per hour, which is easily achieved by modern cycles (Jensen 1998). A German study found that the cyclist is usually the cause of the accident, whereas the walker suffers more severe injuries. The study also found that the cyclists involved in the accidents were usually younger and riding fashionable bicycles; the walking victims were older and frail with a lower tolerance for trauma (Graw and Konig 2002).

It would also appear that cyclists prefer paths which are designed to be unobstructed or constricted by the use of seating and other street furniture and have smooth not tactile surfaces, suitable for people with vision impairment (Australian Bicycle Council 2013). This is contrary to a walker's preference for use of framed views, end vistas and meandering courses (Lynch 1981).

Mees and Groenhart (2012) found that although cycling is of negligible importance as a travel to work mode in Australian cities, it receives more attention from policy makers than walking, which is the most sustainable 'transport' mode. They attribute this to the male domination of the transport planning profession. Mees and Groenhart also found that walking receives little support from policy makers and higher cycling rates have largely come at the expense of walking rather than the car (Mees and Groenhart 2012).

Missing from promotional literature for the Oceanway is what types of behaviour can reasonably be expected of people visiting the beach precinct in the recreational areas of the beachfront, foreshore parklands and adjacent streets. Beach precincts have a particular purposive use that is associated with relaxing, viewing, communing with nature and place, as well as watching, and participating in recreational activities (Raybould and Lazarow 2009). When the purpose of the majority of visitors and users of the beach precinct is to escape the pressures of the city to restore their physical and mental health, avoiding cyclists, modifying activity behaviours and raising attentive awareness (Kaplan 1995) is thought to be counterintuitive to the purpose of a beach precinct visit.

Walking and Promenading

It is instructive to understand the meaning of a promenade in much of the English-speaking world. Its traditional relationship to the transitional seafront space of the beachfront is encoded in the cultural meanings ascribed to the term that many visitors will bring with them to beach precincts. A promenade is place for strolling, where persons walk at leisure for exercise, display, or pleasure. Promenades are located in resort towns and in parks and are public avenues landscaped in a pleasing manner or commanding a view (Encyclopaedia Britannica 2013).

Walking is not just a transport option; it is human activity that is linked to our senses and should not be assumed to be merely a 'movement mode' (Figure 4.2b). Walking also plays a role in the fields of philosophy, spirituality, sexuality, literature, history, science, politics, the

design of cities, and many other fields (Gros 2014). Indeed, it is so embedded as an activity in our natures that its contribution to our culture is often taken for granted (Solnit 2000).



Figure 4.2b: *Some Qualifiers and Synonyms for Walking* (Author 2014, adapted from Nicholson 2008)

Prominent signs to keep left, to not block the path and cyclists ringing bells turn the beachfront transitional corridor into ‘A Smart Travel Initiative’ traffic environment, under notice of penalty for infringement, much more familiar to a road traffic user than a person promenading along the beachfront. The design of the Oceanway path would also seem to have more in common with a road than a footpath in a parkland (Figure 4.2c).

The degree and quality of stimulus is important in considering shared path use as it affects the quality of the walking experience. People prefer pleasurable and attractive environments with a minimum of conflict. They like having room to walk, unhindered by others getting in the way and intruding into their personal space. These negative social-environmental factors apply particularly to females, the young and old (Gehl 2010).

Walking is a form of human behaviour related to purpose and these purposes are often coexistent and simultaneous. We can scan ahead, switch off, listen, talk, drink, answer phones, sing, observe the weather, meditate, ponder, daydream and much more whilst walking, especially along a promenade which connects us to the natural environment

(Berman, Jonides and Kaplan 2008). People engaged in driving wheeled vehicles cannot do any of these things without risking accidents and breaking traffic rules and regulations.



Figure 4.2c: Kurrawa Oceanway Upgrade 'A Smart Travel Initiative' Broadbeach (Author 2012)

The shared path situation in the Gold Coast beach precincts means that walkers have to contend with wheeled vehicles being ridden throughout the public space network of the access form to the beach and ocean. One of the key characteristics of a walkable place is minimal conflict with other modes of travel (Queensland Transport 2014). This does not happen in the Gold Coast, as cyclists are allowed to use footpaths and roads largely as a matter of individual choice.

The shared paths of the Gold Coast beach precincts particularly affect the experience of the elderly, young children and partially-sighted, deaf and mobility impaired walking visitors. The state government and local council have also encouraged Segway's and other powered two- wheeled vehicles to use this promenading space as a traffic route, creating a public space that does not allow people to feel entirely relaxed or safe whilst walking (Wuth 2013).

The shared footpaths concept also runs counter to the alignment of facility and amenity to the benefits of a restorative place that allows people to relax and enjoy connection to the inherent benefits of nature found along the beachfront. It detracts from the value of beach precincts as a place to escape from the stresses of normal city streets. We now continue with the walk-through urban design analysis of the different beach precincts of the study. This will be conducted from the same locations that are also used in the field observations and typological analysis, as explained in section 2.4.

4.2.1 Walking in Broadbeach

Broadbeach has formal paved routes and informal desire line routes that cross through open grassed areas, roads and car parking. The traverse and transect pathways identified in the precinct are bounded in places by road edges, parking and fences. There is only one traffic light controlled crossing of Old Burleigh Road on the transect pathway from the Mall to the boardwalk. Victoria Avenue is a pedestrianised mall and the other roads in the precinct are traffic dominated streets lined with blank walls and high fences around the resorts and other buildings along them (Figure 4.2.1).

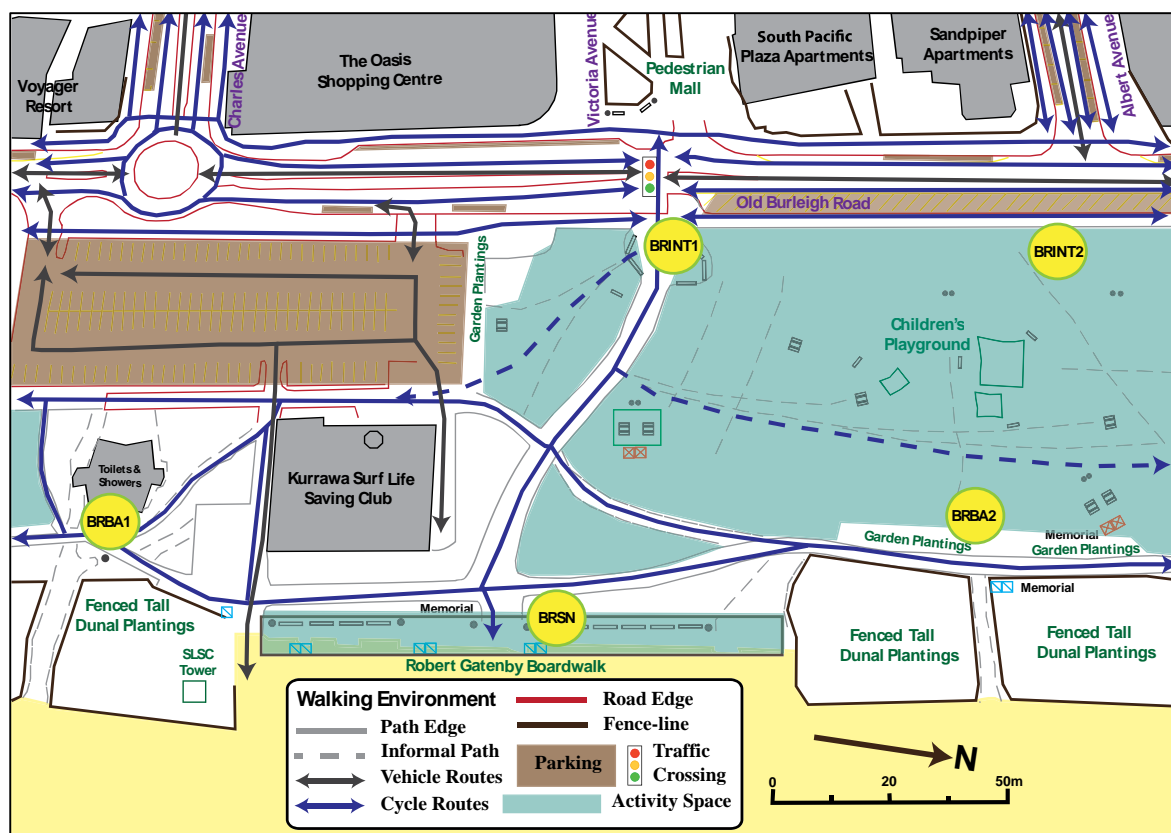


Figure 4.2.1: The Formal and Informal Shared Walking Routes in Broadbeach (Author 2013)

There are three paved, shared path routes in the Broadbeach access form. The foreshore dune traverse pathway travels through the precinct past both beach access points and the social node of the boardwalk. The traverse path splits near the beach access observation point (BRBA1) to run between the Kurrawa SLSC building and its car park and rejoin the foreshore dune pathway in the northern section of the park. The transect path connects the boardwalk to the pedestrian mall in Victoria Avenue through the foreshore park and past the change of form at Old Burleigh Road (BRINT1).

Examining the environment for walking in Broadbeach reveals further impediments to the walkability of Gold Coast beach precincts. This is found in the way people are dominated by various forms of traffic at the transitional spaces within the built form, and when crossing the roads of the precinct to reach the foreshore-park. People also have to cross roads at the intersections of Charles and Albert Avenues with the Old Burleigh Road without clear walking routes.

Motor vehicles such as cars are constrained to particular road spaces and it is relatively predictable that they will found along roads and in car parks. GCCC parks and SLSC vehicles drive very occasionally along the pathways, open spaces and beaches, but cyclists can be encountered not only along roads and cycle lanes but also along the pathways alongside those roads, as well as cutting across the open grassed spaces of the foreshore park.

Car parking is a significant factor in limiting possible walking routes and route choices in the Broadbeach precinct. Large areas of the access form are allocated to roads, parking, fenced dunes, plantings, the shower/toilet block and SLSC buildings and this creates barriers to route choice limiting the potential uses of the foreshore park, especially in the southern section.

Observations tended to suggest that people prefer to use the spaces in the park furthest from road and cycle traffic where the facilities are actually located, even though there is some indication from other authors that people prefer to gather on the edges of open spaces (Alexander *et al.* 1977). This may also explain the large number of informal unpaved routes through the northern foreshore-park as people seek to escape the presence of traffic.

4.2.2 The Pathways in Broadbeach

The traverse path along the length of the foreshore dune in the precinct is in good condition around 3.5m wide, constructed from aggregate, asphalt and patterned paving. At the southern beach access point of BRBA1 there is an intersection of the traverse path with a wide 3.5m soft sand pathway to the beach through the fenced dunes. There is also a 1.2m concrete path network from the traverse path to the toilet/changing building and an uncertain route towards the principal built form across the SLSC car park (Figure 4.2.2a).



Figure 4.2.2a: The Route toward the Principal Built Form from BRBA1 (Author 2013)

There are no places to sit, no shade, shelter or pedestrian oriented lighting along the pathway in this location. There is no appropriate signage for walkers in the location of the toilet block (BRBA1) but there are Oceanway traffic signs. There are no visible events and activities programs, public surveillance cameras or feedback systems to responsible authorities in the beach precincts generally. This lack of signage useful for walkers is, like the shared path scenario, a default situation for all the Gold Coast beach precincts.

Continuing along the traverse path past the Kurrawa SLSC (BRSN) building and the Robert Gatenby Boardwalk, the path intersects the transect pathway to Victoria Avenue at the location of the boardwalk near BRSN. The transect path to the boardwalk from the traverse path is up to 8m wide and timber surfaced. The boardwalk is 4.5m wide and constructed of timber with a step down transition to the beach (Figure 4.2.2b).

There is no clear route from the traverse pathway to the Kurrawa SLSC building except by steps from the pathway. The boardwalk has ample seating, showers, water bubblers, bins and shade to allow walkers to rest on the boardwalk, as well as pleasant views and access to the

beach and foreshore park. However, the transition from the boardwalk to the beach is not ideal for people with limited or impaired mobility. The first floor facilities of the Kurrawa SLSC can be seen but not understood and they are not explained by signs from the boardwalk.



Figure 4.2.2b: The Robert Gatenby Boardwalk Beach Access at BRSN (Author 2012)

There is a 1200mm wide 40 metre long soft sand pathway through fenced dunal plantings to access the beach and ocean from the northern park (BRBA2) location. All other routes from BRBA2 are informal, grassed, desire-line pathways across and within the foreshore-park to the principal built form. Electric hire scooters were an unexpected use of the traverse pathway at BRBA2 during the analysis observations. Some people were also observed to be moving parallel to the traverse path within the foreshore park on foot and bicycles.

The plantings along the traverse path combine with the fenced dunes to create a pleasant walking route, although there are no places to stop and rest along the path at the location (Figure 4.2.2c). Lighting along the traverse path is too widely spaced and not suitable for walkers, making the pathway potentially dangerous in the evening and at night.



Figure 4.2.2c: The Traverse Path in the Northern Foreshore Park Broadbeach (Author 2012)

The only paved transect route in the precinct travels from Victoria Avenue across Old Burleigh Road, through the Broadbeach Mall (BRINT1) location to the Robert Gatenby Boardwalk (BRSN), directly connecting the Broadbeach Mall to the beach and ocean. Vehicular traffic has priority on the pedestrian demand traffic crossing at Old Burleigh Road. The design of the kerb at the crossing could cause difficulty for some people with sight or mobility impairment.

At the location of the transition from Old Burleigh Road to the foreshore-park, seats are arranged in a semi-circle facing the crossing. There are shade trees around the edge of the pathway which narrows from 6 to 3.5 metres. As the path continues across the foreshore park there is no shade or seating in the park for walkers along the transect path (Figure 4.2.2d).

The other path found at the location travels alongside the road in the direction of the Albert Avenue (BRINT2) location along the foreshore park side of Old Burleigh Road. This pathway is 2.6m wide aggregate in good condition. There are also some irregular desire-line pathways from the northern park beach access (BRBA2) location to the distant children's playground, car-parking along Old Burleigh Road and the Kurrawa SLSC building.



Figure 4.2.2d: The Transect Path across Old Burleigh Road Broadbeach (Author 2012)

The transect pathway from the traverse pathway at the northern park beach access location of BRBA2 to the change of form location of Albert Avenue (BRINT2) is an irregular route that crosses the open grassed spaces of the foreshore park along a desire-line past the children's playground towards the intersection of Albert Avenue and Old Burleigh Road.

The pathways along Albert Avenue and Old Burleigh Road are various widths from 1.2 to 2.7m and varied surfaces from aggregate, paving and asphalt and uneven in some places. There are no clear walking routes across Old Burleigh Road from Albert Avenue to the foreshore-park and no spaces are left for walkers to go through the angle parked cars along the foreshore-park side of the road (Figure 4.2.2e).

The transitional spaces in the precinct are poorly designed and change abruptly between different types of environment. Parking and traffic have been allowed to dominate much of the public space network in the precinct especially along Old Burleigh Road and in the SLSC car-park. More could be made of the transitions from built to park environments to enhance a sense of arrival, with information and structures to orient, organise and inform the gateway functions of pathways across the road. Creating arrival signage for walkers to the foreshore park would usefully inform visitors of the activities, amenities and facilities available to them.



Figure 4.2.2e: The Vehicle Dominated Foreshore Park Access from Albert Avenue (Author 2012)

The good condition, smooth surfaces, widths and largely straight or gently curving design of the paved pathways within the foreshore park indicate that the council is paying attention to the condition and nature of the pathways, particularly for cycling. Facilities and amenities in the foreshore park are widely spaced, usually at a distance from the pathways and often of a single use nature. The most common pattern of walking observed in the Broadbeach precinct was to walk along the path from the pedestrian mall, step off the path to pause at the boardwalk, view the coast and move on to travel along another path and walk out of the precinct.

The nature of the paths and the design for separation of the pathways from activity in the foreshore park, suggests the influence of council officers who want good transit pathways in the foreshore park for shared use. The intent appears to be to avoid compromising the cycle route by allowing people to cross them or wander into the path of cyclists from adjacent activity or rest spaces. The design of straight or gently curved pathways, that don't meander or abruptly terminate within the park, indicates an interest in traffic flow suited to vehicles (Queensland Transport 2014) rather than an interest in a constantly changing environment suited to walking, where sensory stimulus at a frequency of every five to six metres is desirable (Hall 1966).

4.2.3 Walking in Burleigh Heads

There are clearly identifiable traverse and transect routes for walkers along shared paths in the Burleigh Heads beach precinct, and paths along the roads that separate and define two major public open spaces: the foreshore park and the Memorial Park. The traverse path along the beachfront is the least influenced by traffic, although it is bounded inland in some places by parking along the edges of the foreshore park. Besides the occasional SLSC vehicle crossing the pathway from the club and SLSC storage to the beach, walkers only have to deal with the shared path status along the traverse pathway (Figure 4.2.3a).

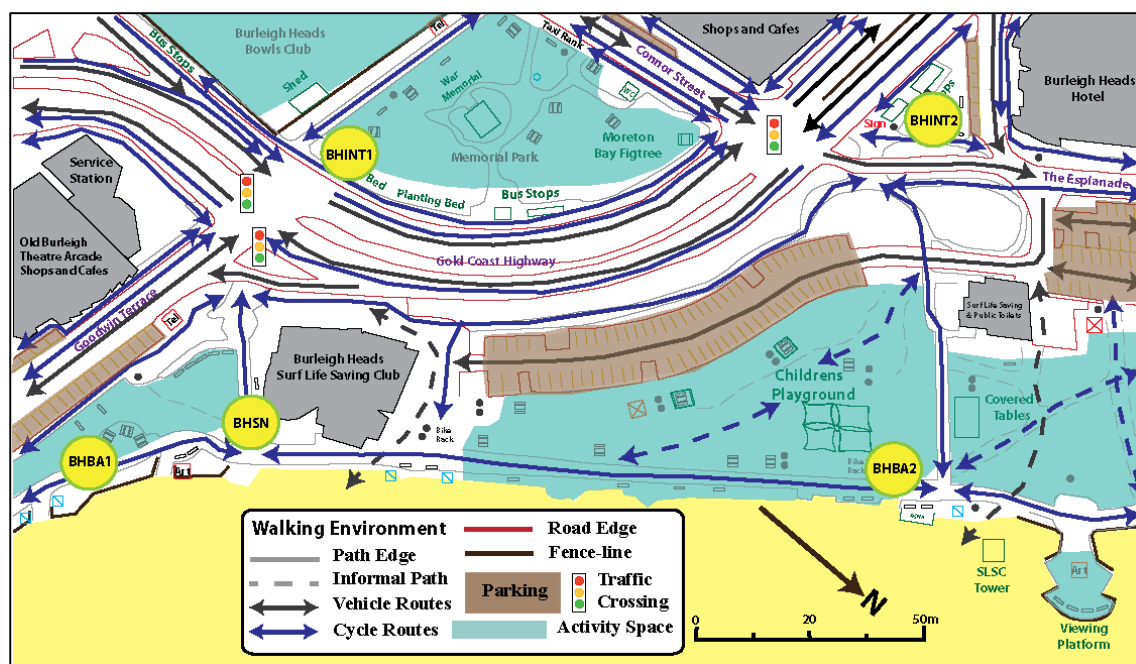


Figure 4.2.3a: The Formal and Informal Shared Walking Routes in Burleigh Heads (Author 2013)

The routes of the transect pathways are largely determined by the positioning of the SLSC and the toilet/changing block buildings, the traffic lights across the Gold Coast Highway and the location of the car parks along Goodwin Terrace, the Gold Coast Highway and The Esplanade. The transect routes pass through gaps between these elements and through transit choice spaces, where people can choose to continue walking across the highway, access facilities along Goodwin Terrace, the Gold Coast Highway, Connor Street and The Esplanade. Once across the highway both transect routes converge on Connor Street and the facilities and activities available along the highway and within the town precinct.

The informal pathways in the beach precinct are found in the open grassed park spaces and through the car park spaces along the edges of the road. Most of these can be navigated by able-bodied persons but not by those with mobility issues, as people are required to pass

through narrow spaces between cars. There is also an inherent degree of danger from cars reversing or entering parking spaces or when people emerge from behind parked cars onto roads, especially for those people with perception and mobility (Figure 4.2.3b). Each of the car park areas in the precinct is arranged differently and present different challenges to people walking in the precinct.



Figure 4.2.3b: Parking along Goodwin Terrace Burleigh Heads (Author 2012).

The traffic along Goodwin Terrace and The Esplanade is generally light and the busy Gold Coast Highway is the major obstacle for walkers moving inland from the foreshore park. Most people follow the paved routes to cross at the traffic lights. However, a few people choose to cross the highway between the northbound bus stop in Memorial Park and the foreshore park.

The council has erected a concrete and metal barrier to prevent people crossing the Gold Coast Highway from the cafes, offices and shops along the Highway and the southbound bus stop near the Burleigh Heads Hotel. In so doing, an eyesore has been created that is not improved by poorly conceived and executed ‘beach’ decoration (Figure 4.2.3c)

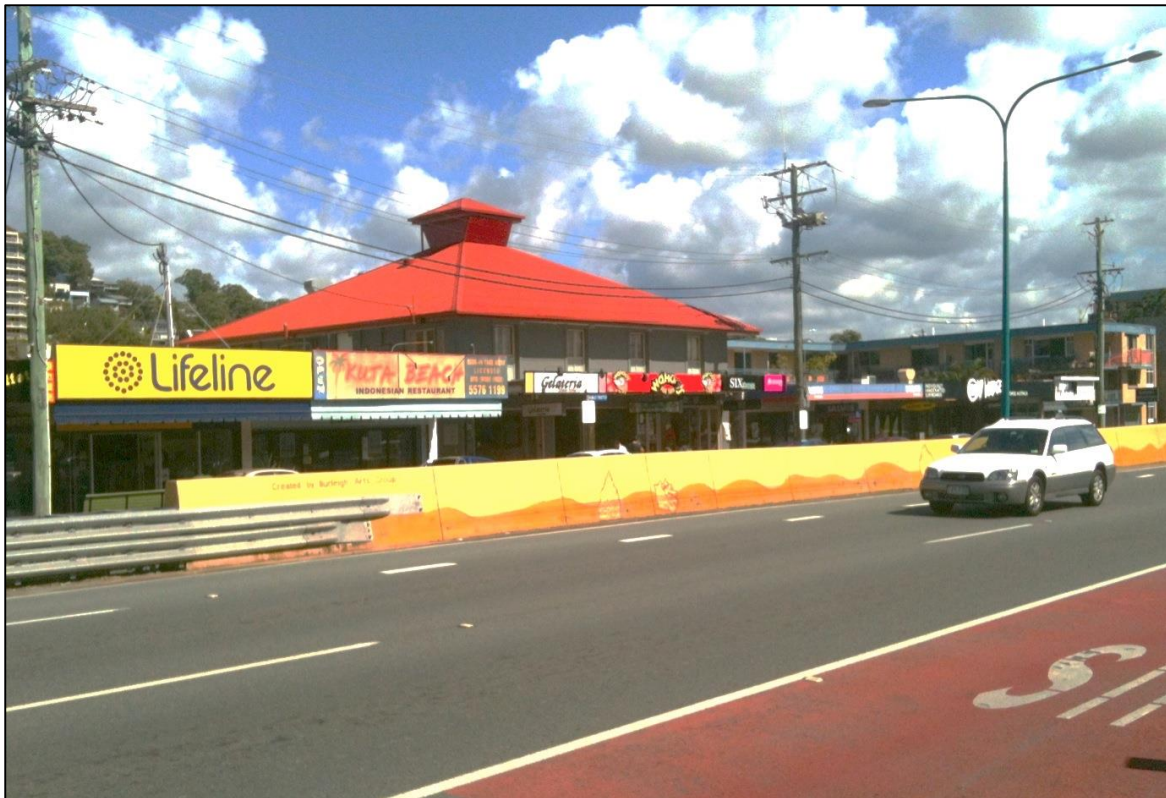


Figure 4.2.3c: Pedestrian and Traffic Barrier Gold Coast Highway Burleigh Heads (Author 2012)

4.2.4 The Pathways in Burleigh Heads

The traverse path in the Burleigh Heads beach precinct travels through foreshore parkland along the beachfront. In the southeast section of the foreshore park between the beach access point at BHBA1 (Goodwin Terrace) and social node at BHSN (Burleigh Heads SLSC) the pathway is 3.5m wide in good condition and textured, plain concrete. There are shaded benches and tables under trees just off the pathway and some other seats in full sun with better views along the coast.

Whilst walking along the traverse path in the foreshore park, people can enjoy constantly changing views along the path, across the beach and towards the ocean as well as glimpses of Burleigh Headlands and inland to the resort apartments, shops and cafes along Goodwin Terrace, although vehicles and parked cars can obscure ground level details. The scale, detail and intent of the signage at the intersection of the traverse and transect path is not designed for people who are walking in the precinct. Instead it appears to be designed to inform drivers of parking, routes and facilities within driving distance and for cyclists to distant locations along the ‘Oceanway’ and warn them of the presence of people walking (Figure 4.2.4a).

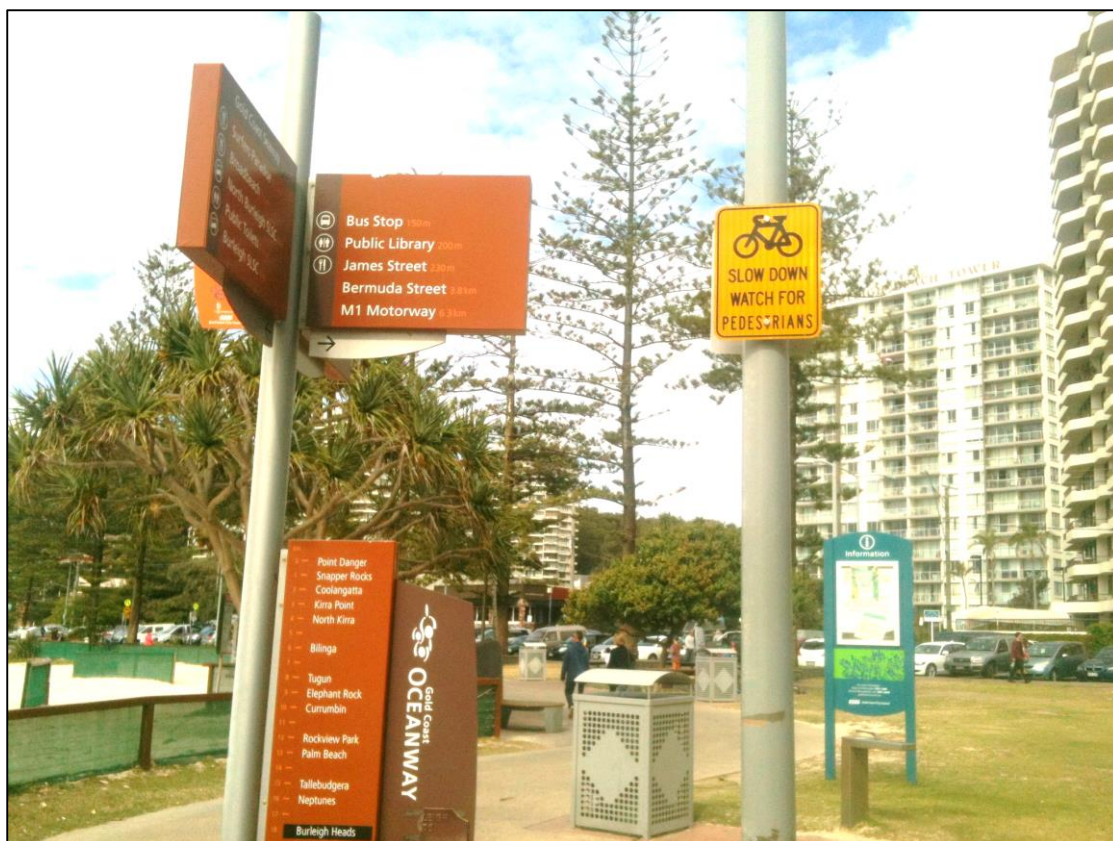


Figure 4.2.4a: Signage for Drivers and Cyclists on Burleigh Heads Beachfront (Author 2014)

The only toilets in the locality are in the SLSC building. However, they are not signed from the outside or appear on the precinct map and have club entry requirements to access (State Government of Queensland, 2014). From the SLSC club onward, people can step off the pathway directly onto the beach. There is also a cafe just off the traverse path, on the ground floor of the SLSC building facing the beach. Here the public can buy drinks and meals and sit down without needing to meet Queensland club sign-in rules. There is also a ground floor bar that the public can access subject to licensing and club rules.

The traverse route continues past BHSN and travels along the beach front to the beach access point and intersection with the transect path in The Esplanade (BHINT2) location. The traverse path is around 3.5m wide and it has different surfaces: concrete, asphalt and some uneven paving in different sections. The area is well planted with mature trees and there is some sand blow, vegetative and human litter along the pathway. There are bins, shaded seats and benches and tables just off the path all along this section where people can rest, take in the views, eat, drink and talk (Figure 4.2.4b)



Figure 4.2.4b: The Traverse Pathway along Burleigh Heads Beachfront (Author 2012)

The transect route from the SLSC is a 3 metre pathway that crosses the Gold Coast Highway at traffic lights and passes the change of form observation point at the Memorial Park (BHINT1) location between the Bowls Club and Memorial Park towards cafes, offices, shops and other destinations in James and Connor Streets. As it approaches the Gold Coast Highway, the pathway first crosses a slip road from the Highway into Goodwin Terrace. People then have to cross Goodwin Terrace and the Gold Coast Highway traffic lights. The lights on the Gold Coast Highway do not have a long pedestrian crossing period and slower or older pedestrians may have difficulty crossing in time (Phenton 2013).

The smaller pathways from the transect pathways along the roads are generally narrower than the transect path. The pathways from the Gold Coast Highway traffic lights to the bus stops are about 2.3 metre concrete aggregate. There are some seats both in the sun and in shade along the transect pathway between the Bowls Club and the Memorial Park. The stretch of the transect path between the Bowls Club and the Memorial Park has the only path lighting suitable for pedestrians in all of the beach precincts studied (Figure 4.2.4c). There is also a rare public pay telephone near the intersection of the transect path with Connor Street.



Figure 4.2.4c: The Traverse Path Pedestrian Lighting in the Memorial Park (Author 2012)

The transect path in the larger northwest section of the foreshore park starts at the children's playground (BHBA2) location at the intersection with the traverse path. This pathway is a 2.75 metre wide asphalt route from the beachfront inland with some litter and windblown sand across it. There are some short narrow paths connecting to toilet, changing and resting facilities along its length (Figure 4.2.4d).

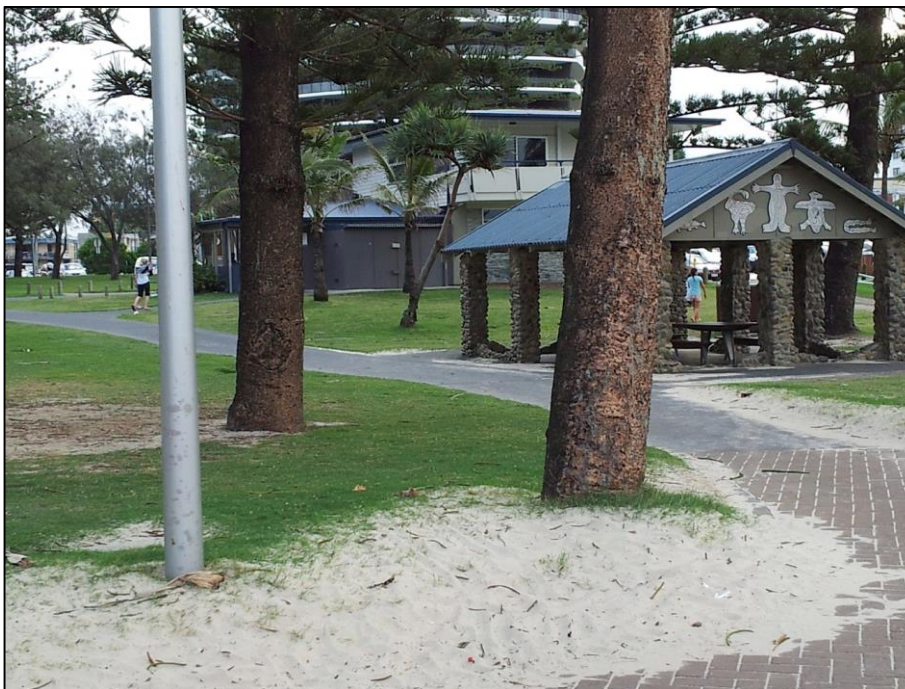


Figure 4.2.4d: The Transect Pathway Inland to The Esplanade from the Beachfront at BHBA2 (Author 2012)

There is no lighting along the path as it travels inland to the intersection of The Esplanade and the Gold Coast Highway. The transect pathway continues past the change of form observation point at The Esplanade (BHINT2) location near the southbound bus stop at the intersection of Connor Street, the Gold Coast Highway and the Esplanade, and crosses over at the traffic lights into Connor Street.

The Esplanade (BHINT2) location has a confusion of path types, lengths and widths going in different directions along roads, to car parks and across parkland and including a dead end traffic crossing from the Burleigh Heads Hotel to the car-park opposite. There is a confusion of routes and spaces along the pathway as it transitions from the foreshore park across car park entries and The Esplanade (Figure 4.2.4e). A slip road past the Burleigh Heads Hotel from the Gold Coast Highway as well as to the traffic light crossing to Connor Street slows and hinders pedestrian travel.

There are many destination choices from the (BHINT2) location. To the other side of the highway there are shops, cafes, restaurants, offices and other businesses that could support extended stays in the precinct and the Memorial Park across Connor Street. There are also other commercial destinations along The Esplanade as well as resort and residential towers and the Burleigh Heads Hotel.



Figure 4.2.4e: The Transect Pathway from Bus Stop to the Beachfront at BHINT2 (Author 2012)

4.2.5 Walking in Mermaid Beach

The traverse pathway in the Mermaid Beach precinct is Hedges Avenue which has no clear visual connection to the beach, except as it passes the pocket foreshore park where there are glimpses of the ocean. The transect pathways from the pocket park beach access (MBBA1) location and the Ventura Road beach access (MBBA2) location to the change of forms at Montana Road (MBINT1) and the Ventura Road (MBINT2) locations and the designated social node of the Mermaid Beach SLSC (MBSN) location are connected to the beach by poorly defined routes (Figure 4.2.5a).

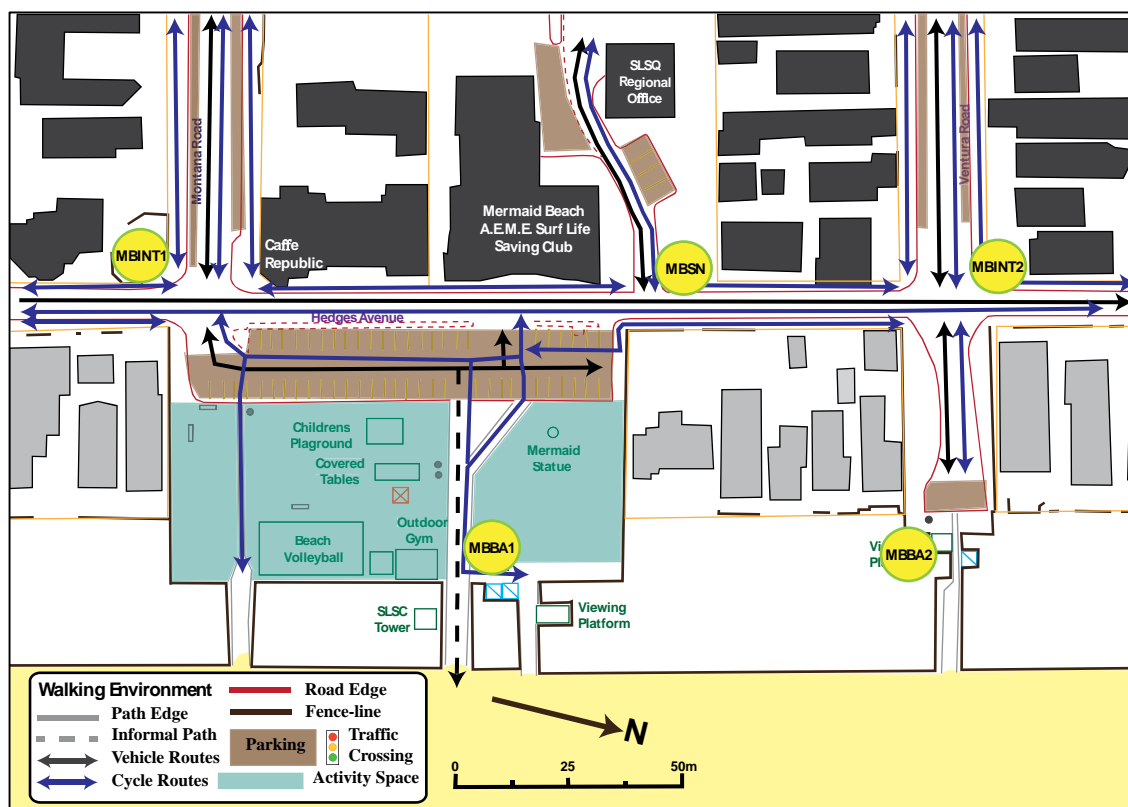


Figure 4.2.5a: The Formal and Informal Shared Walking Routes in Mermaid Beach (Author 2013)

The only destinations for visitors within the beach precinct are all no further than 100m from the pocket foreshore park, the exception being the viewing platform at the Ventura Road beach access (MBBA2) location which is 160m from the foreshore park along Hedges Avenue and Ventura Road. This makes the Ventura Road beach access (MBBA2) location a disconnected destination for visitors to the beach precinct and it is largely used by local residents to access the beach and ocean.

The walking routes in Mermaid Beach are short, constrained and often through a walking environment that is not conducive to walking. The footpaths that do exist in the precinct are

often patched with different material finishes, narrow, uneven, broken in places and frequently interrupted by driveways, roads, car parks and dead ends. There is little shade along the roads. The best walking environments in the beach precinct are along the beach and in the pocket foreshore park. There is little incentive to travel by foot from these places unless you are a local resident or heading for the Gold Coast highway over 375m distant.

Traffic dominates the design of the public space network in Mermaid Beach. The combination of traffic regulations, street design, inadequate footpaths, high walls and driveways, intersection design, narrow uneven paths, the location and arrangement of the parking lot all indicate vehicle and cyclist preference over walkers in the design of the precinct. The lack of improvement of the design is probably related to the residents' desire to keep the precinct exclusive (Willoughby 2012c) (Figure 4.2.5b).



Figure 4.2.5b: The Public Space Network in Mermaid Beach (Author 2012)

4.2.6 The Pathways in Mermaid Beach

The traverse path in Mermaid Beach travels along Hedges Avenue. If the project for an Oceanway were to be successful, the traverse path would travel through the public dune at the

beach side of the private residences along Hedges Avenue, giving these homes two public frontages.

Travelling from the transitional location of the intersection of Montana Road and Hedges Avenue change of form observation point at MBBINT1, the traverse pathway is 1.2 metre wide along Hedges Avenue and 3.8 metre wide in front of the Caffè Republic. The pathway here is constructed of concrete, and is patched and cracked. The Montana Road crossing would be difficult for anyone with mobility impairment and was considered to be a tripping or stumbling hazard at the kerbsides and across the intersection (Figure 4.2.5c).



Figure 4.2.5c: The Montana Road Crossing Disrespects Walkers (MBINT1) (Author 2012)

There is no room on the traverse pathway for shared path use although cyclists were observed using the footpath as well as the road. This practice is hazardous for residents walking from their homes and people walking along the narrow footpaths. There is also a hazardous situation where vehicles drive or back out from hidden driveways behind gates from walled homes along the entire length of the traverse pathway, in the precinct and suburb (Elder 2011).

The section along Hedges Avenue opposite the pocket foreshore park is particularly hostile to walkers, with no clear pathway to the park from Montana Road through the car parking space. Instead, people are diverted to the crossing near the SLSC along an uneven and cambered 1.2

metre pathway, with traffic passing close by. On the opposite side of the road there is no footpath and walking is forbidden by the cycleway (Figure 4.2.5d).

The poorly constructed and maintained 1.2 metre concrete, patched and cracked traverse pathway along Hedges Avenue continues past the Mermaid Beach SLSC social node (MBSN) location. As people travel along this path they can be obliged to step into the road to avoid light poles, bins on collection days and power line poles in some sections on the pathway.



Figure 4.2.5d: The Traverse Pathway along Hedges Avenue at Montana Road (Author 2012)

The 1.2m traverse pathway continues in the same vein along the SLSC side of Hedges Avenue. The pathway narrows further over drains and, during the walk-through analysis, vehicles were parked across the path from the short driveways from homes along Hedges Avenue.

There is a pedestrian crossing near the SLSC that crosses Hedges Avenue with a relatively clear view through the car park to the pocket foreshore park, dune and glimpse of the ocean. This is an important route for SLSC members to travel to and from the club to the beach for SLS activities and training (Figure 4.2.5e).

The traverse pathway continues towards the Ventura Road location of MBINT2 across the road leading to the SLSQ Regional Office and Mermaid Park behind the office. There is a 1.2m concrete pathway that leads to a clean but ageing and unpleasant public toilet. The toilets have a small sign outside but there are no other directions to them from elsewhere in the precinct and they can easily be missed from Hedges Avenue



Figure 4.2.5e: The Transect Pathway Crossing Connecting the SLSC and the Beach (Author 2012)

Hedges Avenue continues with an obstructed, 1.2 metre concrete, unshaded, patched, broken and poorly designed pathway on both sides of the street past the SLSC in the direction of Ventura Road (MBINT2) and Broadbeach. The walking environment at the Ventura Road intersection is worse than would be expected of a shabby inner city location, rather than one of the most expensive streets in Australia. The footpaths at this location present a litany of hazardous conditions for any walker but especially people pushing prams with children walking alongside them, the young, old and those with perception and mobility impairment (Figure 4.2.5f)

The transect path along Ventura Road connects the Gold Coast Highway to the beach, a distance of around 375 metres. The intersection of Ventura Road and Hedges Avenue is about 90m from the beach access point. Along Ventura Road past the Hedges Avenue intersection there are 1.2 metre concrete aggregate footpaths of variable condition on both sides of the road leading to the highway.

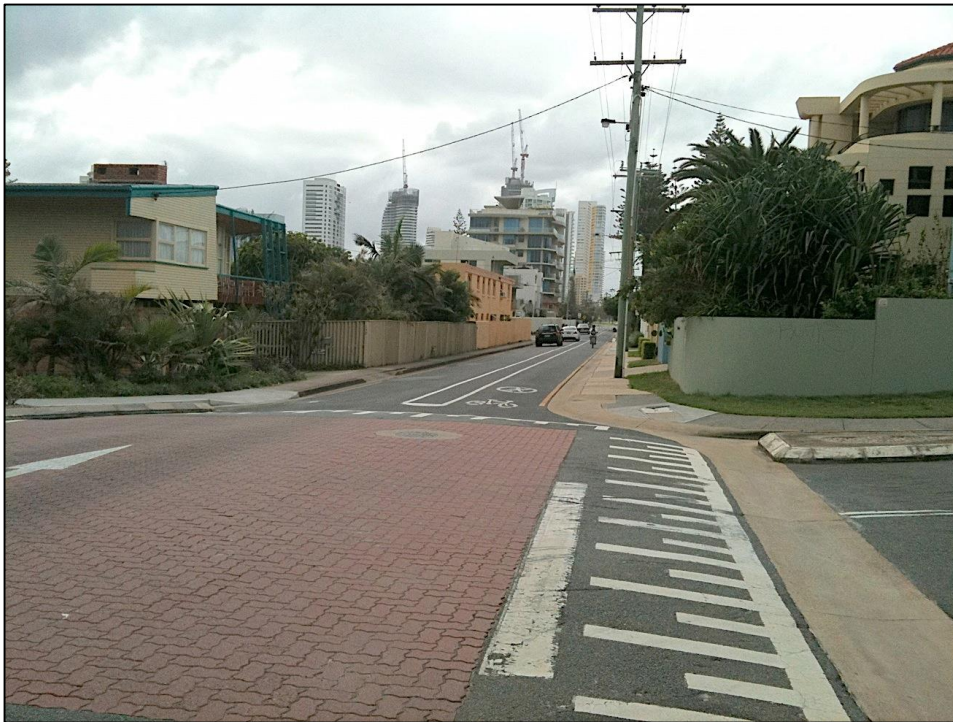


Figure 4.2.5f: The Intersection of Hedges Avenue and Ventura Road, the Location of MBINT2 (Author 2012)

The route from the beach access point of MBBA2 to MBINT2 along Ventura Road obliges walkers to walk along the road and through parked cars to reach the beach access point. The road continues to a viewing platform with bench seating and a shower at the beginning of a fenced 1.2m soft sand pathway through the dunes (Figure 4.2.5g).



Figure 4.2.5g: The Entry of the Transect Pathway to the Viewing Platform at MBBA2 (Author 2012)

The transect pathway from the beach access pocket park (MBBA1) location is 3.8 metres wide, concrete aggregate in good condition, with some sand blown across the path, especially near the fenced, soft sand path through the fenced dune. This pathway also serves as the route from the SLSC to the beach for the SLSC utility vehicles, tractors and trailers as well as for people to access the beach (Figure 4.2.5h). This pathway travels through the pocket foreshore park and into the adjacent car-park and Hedges Avenue.



Figure 4.2.5h: The Transect Pathway from the Beach through the Foreshore Park at MBBA1 (Author 2012)

Having examined the governance of walkability in the beach precincts, we now continue the urban design analysis to consider the degree of accessibility to activity, amenity and facility in the different locations of the beach precincts.

4.3. The Accessibility of Activity, Facility and Amenity in the Beach Precincts

The whole purpose of the urban design principle of accessibility (Section 3.3.3), as adopted by this thesis, is to allow for an analysis of how people can meet their expectations for activity, facility and amenity in the unique natural, transitional and built environments found only at beach precincts. Previous chapters strongly suggest that the nature of the public access to the key transitions from built form to access form, and access form to the natural environment, is the critical difference between a beach precinct that succeeds in fulfilling people's intent of visitation and one that does not.

The previous chapters also indicate that the design and planning of the public realm in the different beach precincts favour the specific interests of dominant and project groups (section 3.0.1) in the nature of accessibility to the natural environment. These decisions have occurred in the transitional locations and forms of the beach precincts over a historical period. These decisions have fixed the quantity and quality of public access and the opportunities for other activities to take place in the limited and contested public realm of the beach precincts.

This thesis has revealed the public access to the beach at the foreshore-to-beach transition to be the most important space in the beach precinct. The design of this transitional space determines how well the beach precinct will fit the purpose of visit. Carr *et al.* (1992a) describe three forms of access: visual, physical and symbolic. These forms of access in this transitional space are also the way the dominant political groups create, control, invite, deter, exclude, include and maintain permitted behaviours and activities (Carr *et al.* 1992a).

Visual access is considered a very important element of public access in beach precincts, as it is the views to the sea or ocean across the beach that are the most valued by residents, tourists and visitors in beach precincts. This is evidenced in the narrative surrounding public access to the beachfront in the Gold Coast Oceanway project and the economic value of views to beachfront property owners (Section 2.2). In this thesis visual access has been incorporated into the walk-through analysis (Appendix A) of the urban design attribute of 'connected'.

Visual access is also interactive with the degree of physical access and the existence of visible and implied barriers to movement and entry into spaces and places. In this thesis these

characteristics have been incorporated into the analysis of the urban design attribute of ‘permeable’. Visual access and physical access are also conditioned by the degree of symbolic access; those animate or inanimate cues in the environment that can deter or invite people into spaces. In this thesis this has been incorporated into the analysis of the urban design attribute of ‘openness’. In the analysis of the visual extent of beach precincts it was necessary to define particular meanings to describe different types of views adopted for the visual survey:

- **‘Panorama’** is seen as the extent of an unobstructed view to the horizon that the viewer observes standing at an observation point and limited to observing from left to right through 180 degrees.
- **‘View’** is seen as the extent of an area that the viewer observes standing at an observation point looking straight ahead. It is limited to the range that objects or features can be observed and the clarity of detail that can be identified in the view.
- **‘Vista’** is a type of view that is framed by elements in the landscape that the viewer observes standing at an observation point looking straight ahead and this view is limited by what objects or features can be clearly identified in the view.
- **‘Picturesque’** is a panorama, a view or vista that is visually appealing, attractive or impressive and related to natural, built or human environments and activity that may be considered suitable as the subject for a photograph or painting.
- **‘Scenic’** is a panorama, a view or vista that is related to the natural scenery of the area and suitable as a photograph or painting (Carr *et al.* 1992b).

The following subsections will incorporate the ‘sense of extent’ in the examination of visual access to and from the observational locations of the study. The ‘sense of extent’, which according to Kaplan (1995) allows for the differences between different but similar spaces to be explained, will be examined. This is intended to explain the visual relationship between the transitional locations and the different environments of the beach precinct. The walk-through analysis of the attributes of accessibility will report in the following format for each of the different types of location in those precincts (Section 2.4):

- The visible extent of the theatrical, spectator, distant and horizon visual connections from the observation points to the natural environment, and the types of movement and activity observed at the location.

- The physical characteristics of barriers from, between and to the visible destinations and facilities, within and outside the beach precinct
- The symbolic characteristics of the animate and inanimate cues that may affect entry into public and commercial places located in the beach precincts.

Each of the locations will be examined for the visual distances at which a visitor to the beach can identify the facilities they can use in the immediate locality and at a spectator distance, along with the physical, visual and social barriers to their access and use. This will describe the degree of enclosure, permeability and openness of the visual connections from place to place, thus describing the limits of people's view and likely understanding.

4.3.1 Broadbeach

The Visible Extent from Transitional Locations

The visual survey of the accessibility of the beach precincts was conducted from the observational locations (Section 2.4). The visible extents from each location are represented as hexagons in the diagrams in this section. The inner hexagon represents the theatrical distance from the observation point at 35m and 30 seconds walking distance (Figure 4.3.1a). Within this distance people can progressively understand the social and physical expressions and activities of other people and begin to read the signage and uses of buildings and facilities as they get closer. The outer hexagon is the limit of the spectator distance at 70m and one minute's walking distance. At this distance people's activities and identity can be recognised and the purpose of buildings within that distance can start to be understood (section 4.0.2).

In Broadbeach only the Kurrawa SLSC (BRSN) observation point was in visual connection to the beach, foreshore park and principal built form. For this reason it is considered the most important and connected transitional location in this beach precinct for public access to the inherent benefits of the precinct. Even so, the SLSC building limits views in the direction of Charles Avenue and the fenced dunal plantings obscure views to parts of the beach and foreshore park.

There were more people visible at the Kurrawa SLSC (BRSN) location than at a distance, indicating that the location is an activity space where people are pausing or staying, rather than moving through. During the survey it was noted that the distribution pattern of people visible from each observation point appears to indicate patterns of use related to place. If

there are more people visible at a location, or within spectator distance, than beyond it, either the location is enclosed and not in visual connection to distant places, or it is used for activities other than movement.

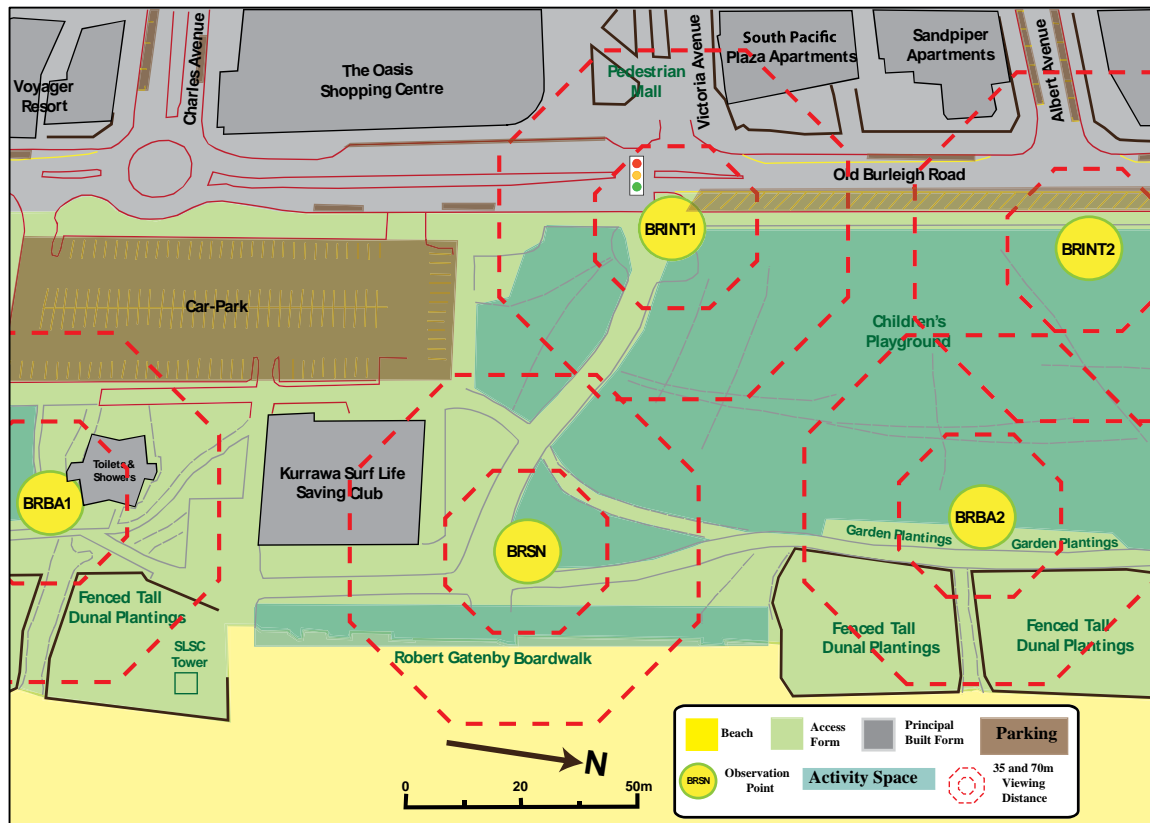


Figure 4.3.1a: View Distances from Transitional Observation Locations Broadbeach (Author, 2013)

The extent of the view from BRSN is affected by the location of the boardwalk which sits on top of the foredune ridge. Views to the beach and ocean are clearer from the beach edge of the boardwalk. The foreshore park and the reverse slope of the foredune, which is planted with *Casuarina* trees, enhance the visual qualities of the place on the park edge of the boardwalk. The diagram shows that the boardwalk is well suited to enable high quality views to the natural environments of the beach and ocean and to the parklands (Figure 4.3.1b).

The Kurrawa SLSC social node location (BRSN) has the only panoramic views in the precinct with picturesque and scenic qualities along the beach to the horizon. Looking inland, there are pleasant urban/park views through the foreshore park to the high rise in the principal built form. There are also pleasant and scenic vistas along the traverse path from the location. The boardwalk fronts directly onto the beach and is elevated by about a metre, with horizon to horizon views of the ocean down to Coolangatta. Views are blocked by a *Casuarina* grove in the Surfers Paradise direction, although this too is an attractive and scenic view.

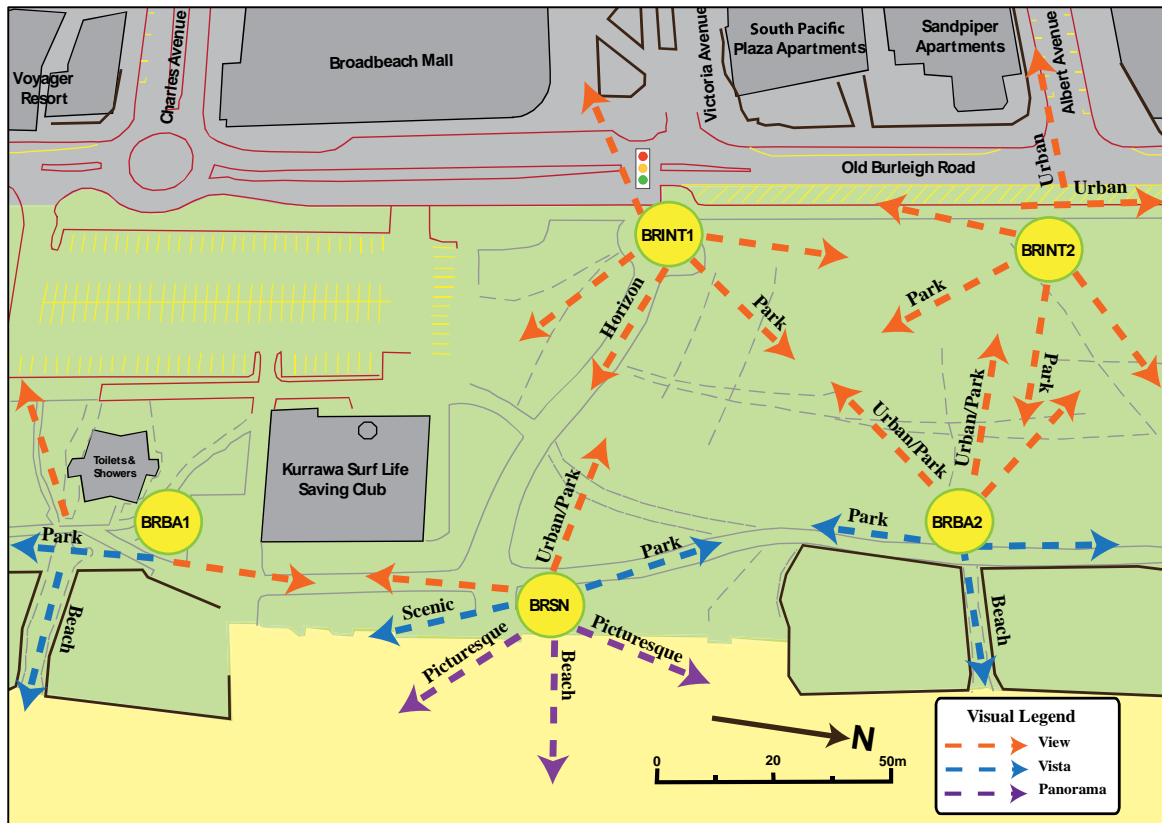


Figure 4.3.1b: Views from the Transitional Observation Locations Broadbeach (Author, 2013)

We now move to a consideration of the way the visual extents affect the visual, physical and symbolic relationship of each location to public access to activity and amenity.

Public Access to Activity and Amenity at Kurrawa SLSC (BRSN)

The walking routes available from the transitional location of the Kurrawa SLSC (BRSN) observation point from the boardwalk onto the beach, inland and along the traverse path are shown in figure 4.3.1c. Entry onto the beach from the boardwalk is by steps (BRSNS). There is a wide shared use path curving past the SLSC, down the traverse path in the Coolangatta direction (BRSND) up the traverse path in the Surfers Paradise direction through the foreshore park (BRSNU) The transect path inland towards Victoria Avenue (BRSNI) connects the beach with shopping in the Mall, apartments and resorts.

The access form of the foreshore park is dominated by the Kurrawa SLSC building and car park, which do not feel open to the public from the location of BRSN and the foreshore parkland.

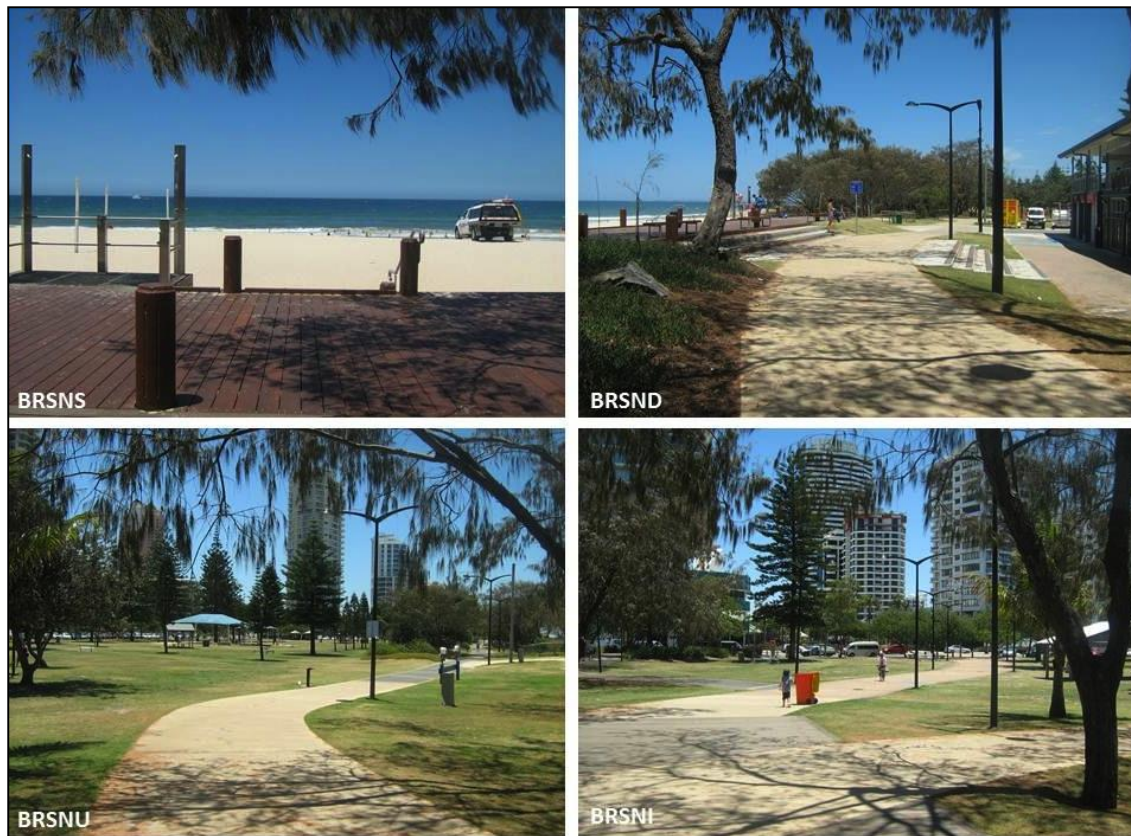


Figure 4.3.1c: *Broadbeach Social Node (BRSN), Spaces, Routes and Limits (Author 2012)*

There are destinations in the Oasis Shopping Centre and along Victoria Avenue to Surf Parade for public transport, parking, police, medical services, businesses, shops, cafes, restaurants, clubs, bars and amusements. These are in the adjacent commercial precinct but not visible from the beach precinct.

More distantly inland from the beach precinct is the Gold Coast Highway, a convention centre, casino hotel and other residential and tourist accommodation. However, there are no information maps in the beach precinct that could inform or orient visitors to public facilities within walking distance.

Although there are visual connections to distant and horizon places along the coast and inland from the boardwalk, it requires local knowledge to identify these places. It would be useful for visitors to have the sort of orienting devices such as maps or models found at other major beach destinations. The relationship of the spatial layout and view limits in the transitional location of BRSN is illustrated in the following image (Figure 4.3.1d).

From the location of BRSN the SLSC building, fenced dunes, beach profile and dune ridge cuts the visual connections from the foreshore park to the beach and ocean and reduce its value for viewing as you walk along the park pathways. The partially blocked, visual relationship of the location to these elements could be improved with international signage or an explanation of the rules of eligibility for entry to the club and public destinations nearby.

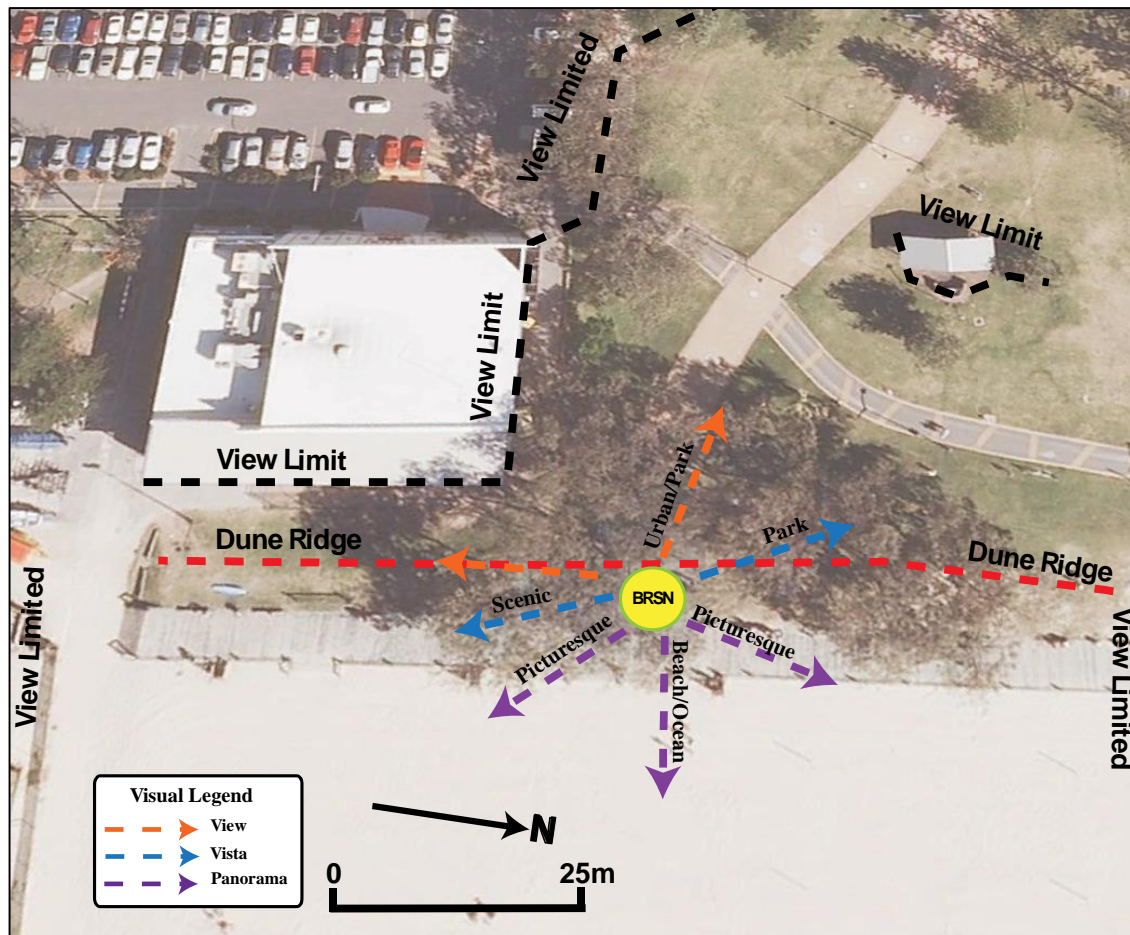


Figure 4.3.1d: The Spatial Layout and View Limits from the Transitional Location of BRSN (Author 2013)

A significant barrier to public access in the whole of the Broadbeach precinct is that there are no public food and drink outlets in the foreshore park besides the Kurrawa SLSC. There are also no visible events or program boards designed for people visiting the precinct on foot. This is particularly surprising for such a significant tourist location. It would appear that visitors are expected to know where everything is. This is in contrast to the signage erected in the precinct during the Australian SLS championships, which occupied the entire Broadbeach parkland (Figure 4.3.1e).



Figure 4.3.1e: Signage in Broadbeach Beach Precinct during the 2012 SLSA Championships (Author 2012)

Public Access to Activity and Amenity at the Toilet Block Location (BRBA1)

The spatial arrangement and physical design of the spaces and buildings at the toilet block location are visually jumbled and confused and limit the permeability of the location especially to an outsider. The toilet block location (BRBA1) is isolated from the other observation points and only has a limited visual connection to the Kurrawa SLSC (BRSN).

The uncertainty of the degree of invitation to travel along pathways can be seen when standing at the toilet block location (BRBA1). The pathway to the beach and ocean is clear through the dunes (BRBA1S) (Figure 4.3.1f). The view northward along the traverse path to the boardwalk also invites the walker to go in that direction, as there are nearly always people visible there (BRBA1U). The route southward along the traverse path is not informative or inviting (BRBA1D). The routes inland towards the built form have some landmark buildings, if you know which ones are which, but desirable routes are also unclear (BRBA1I).



Figure 4.3.1f: Broadbeach Beach Access One (BRBA1), Spaces, Routes and Limits (Author 2012)

From the beach transitional location of BRBA1 there were fewer people visible in the immediate location and at spectator distance than distantly visible. This situation is probably characteristic of locations that are transit spaces rather than activity spaces, as people are not pausing or staying in the location but moving through. The route of the traverse path may be clear at the location but the destinations along it are not.

In the location of the beach access point BRBA1 the visible destinations are the toilet, shower and changing building in the immediate locality, the Kurrawa SLSC building and car park at spectator distance. The Robert Gatenby Boardwalk is visible, but not clear, at a distance. The beach and ocean can also be glimpsed along the fenced dune path at a distance. There is also a children's playground and a car park at a distance. The parking and resorts lining Old Burleigh Road are visible but not clearly understood in the far distance.

The spaces around the southern beach access point at BRBA1 are enclosed, limited and defined by the dunal planting, toilet/shower block locally. The car parking, SLSC building and the children's playground are identifiable distantly, as are the parking and resort buildings along Old Burleigh Road (Figure 4.3.1g).

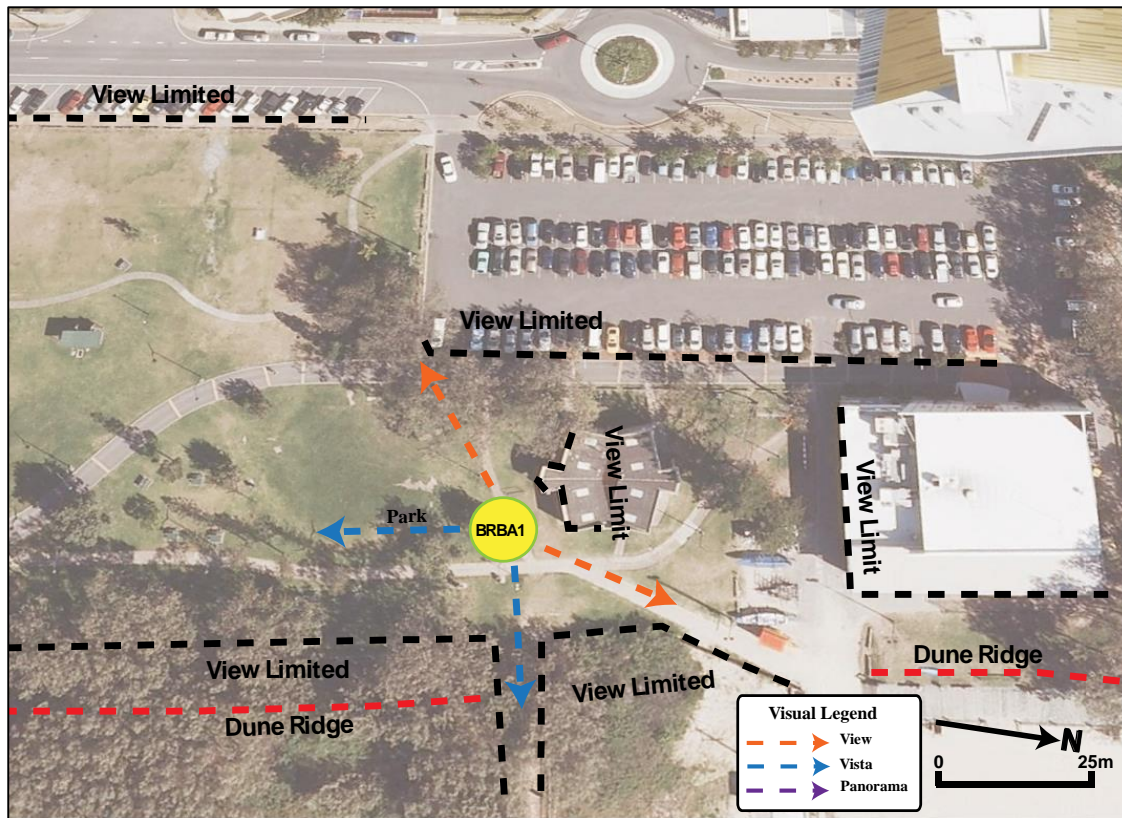


Figure 4.3.1g: The Spatial Layout and View Limits in the Transitional Location of BRBA1 (Author 2013)

Public Access to Activity and Amenity from the Northern Park Beach Access (BRBA2)

The location of BRBA2 has the characteristics of a movement space and more people are visible in the distance and far distance than locally. The shared path use, isolation from other places and lack of passive surveillance, planting in the dunes and park may deter some demographic groups from confidently using the location.

The transitional location of BRBA2 has no destinations within theatrical distance. The children's playground, covered bench tables and BBQs are all at, or within, spectator distance. The destinations at a distance include the beach, dunal and park plantings, other park facilities and parking. At a far distance there are towers and resort buildings visible on Old Burleigh Road, Albert and Victoria Avenues and the SLSC building in the foreshore park. All these buildings require local knowledge of their function and amenities (Figure 4.3.1h).

The nearly 40m long soft sand pathway to the beach would deter the mobility-impaired from accessing the beach at this point and further increase the sense of isolation from the rest of the beach precinct for some groups (BRBA2S). The design of the dunal plantings, (BRBA2U, BRBA2D), the lack of seating and useful shade and the far distant visual connection to the rest of the beach precinct (BRBA2I) all combine to create the sense of an isolated place.



Figure 4.3.1h: *Broadbeach Beach Access Two (BRBA2), Space, Routes and Limits (Author 2012)*

Although the location of BRBA2 is visually attractive and even scenic, the wide traverse pathway and the open grassed spaces seem to invite moving on. The lack of supportive facilities at the location for extended stays also tends to reinforce this impression that stopping is not encouraged.

Public Access to Activity and Amenity at the Broadbeach Mall (BRINT1) Location

The location of BRINT1 is at a change of form transition from built to access form. It is located close to the Broadbeach Mall across Old Burleigh Road and in the edge of the foreshore park, with route choices to the Kurrawa SLSC building and the Robert Gatenby Boardwalk in the far distance. The location has the characteristics of a movement space and more people are visible in the distance and far distance than locally.

There is a distinct change from urban to park environment at the crossing marked by a wide path entry shaded with trees and places to sit. However, this shade does not continue to the boardwalk or into the pedestrian shopping mall. There is also a children's playground and covered seating adjacent to BBQs, at a distance from the traffic crossing.

The Oasis Shopping Centre and Broadbeach Mall is a visually confusing environment when viewed from the park (BRINT1I). Local knowledge is needed to know what is along Old Burleigh Road as the built edges are uninformative of use. Walls and plantings block sight along the mall and there is a nondescript and uninformative entry to the shopping centre (BRINT1D). The resort towers along the road have high walls and pool areas but they are not visible from the road (BRINT1U). There is some route choice into the park and a directed route to the viewing platform and beach access (BRINT1S) (Figure 4.3.1j).



Figure 4.3.1j: Broadbeach Intersection One (BRINT1), Space, Routes and Limits (Author 2012)

The visually obscured destinations from the crossing include the Kurrawa SLSC building and boardwalk towards the ocean, the Oasis building, the Broadbeach Mall along Victoria Avenue, the resorts buildings lining Old Burleigh Road and beyond the plantings, which screen the SLSC car park.

All these destinations have their functions, amenities and facilities concealed by their outward design with lack of signage, blank walls, hidden entrances, fencing, walls and plantings masking their identities to public scrutiny. The gateway function of the only traffic crossing of a busy road in the beach precinct appears to have been ignored by planners. Much

more could be done to facilitate a role for the park side of the crossing as a place to arrive, inform, organize, wait and meet than is currently the case.

Public Access to Activity and Amenity at the Albert Avenue (BRINT2) Location

The transitional location of BRINT2 is defined by the transitional spaces and edges of the park and built environment on both sides of the Old Burleigh Road. The road, traffic and parking dominate sightlines into the park side of the location (BRINT2S). Traffic, parking, fences, plantings and pool decks around the resorts that line Old Burleigh Road and Albert Avenue demarcate the connections, edges and routes on the built form side of the location (BRINT2U, D and I) (Figure 4.3.1k).



4.3.1k: Broadbeach Intersection Two (BRINT2), Space, Routes and Limits (Author 2012)

From Albert Avenue inland there is a visual connection along the road that ends at the far distant Surf Parade and the Phoenician Resort. Along Old Burleigh Road, past the resorts and apartments that line the road, the very distant Q1 building in Surfers Paradise is visible to the north. To the south, along Old Burleigh Road, the view includes the Oasis Shopping Centre, the resorts along the road and a very far distant streetscape without any discernible landmarks.

The Albert Avenue (BRINT2) location is similar in nature to the Broadbeach Mall (BRINT1) location in having two adjacent environments where the visibility of destinations is largely unknown to a visitor unfamiliar with the activities, amenities and facilities available within, and just outside, the precinct. There are no facilities that act as a destination at the location, but the children's playground, seating, covered bench seats and BBQ are all within spectator distance and beach access points and Kurrawa SLSC building are visible in the far distance.

For the walker, crossing to or from the park to Albert Avenue there are a number of barriers to mobility: the abrupt design of the kerbs, the lack of a clear route through angled parked cars and fast cyclists along the pathway on the park side of the road. When crossing the road cyclists may appear unexpectedly from behind large parked vehicles, surprising, especially, small children and the visually impaired.

The spaces in the principal built form do not encourage any activity other than movement. Local knowledge is required to know what is available at a distance along the roads. The pathways are unshaded and lit for vehicular traffic in the principal built form. The design of the roads along with the screening of the resorts from the street and the lack of foot traffic would make the streets and parklands feel unsafe at night.

There are abrupt private to public edges to all the resorts, and none of the buildings having any sense of openness to the public. Indeed, they forbid entry by layered barriers of bed plantings along the high blank walls that surround the resorts, the set back of the buildings and their imposing heights.

Lighting is poor for walkers on all the pavements in the precinct, being spaced and at a height to illuminate roads for traffic rather than for walkers. Beyond the road there are no lights in the large parklands of the location making it feel unsafe for use at night, especially as there is no real level of useful public surveillance from the buildings in the near and far distance.

4.3.2 Burleigh Heads

The Visible Extent from Transitional Locations in Burleigh Heads

Burleigh Heads differs from Broadbeach in the relationship of the foreshore park and the beach and the nature of the transition between them. There is no foredune crest or tall dunal plantings to sever the visual link from the traverse path, as is found in Broadbeach. This

situation allows the traverse path along the foreshore to act as a promenading route in the Burleigh Heads beach precinct.

This is not the case in the other two beach precincts studied in this thesis. All along the traverse path in the Burleigh Heads precinct the activities on the beach are within spectator distance and add to the sense of being ‘at the beach’ created by the close visual perceptual distances. In some places along the traverse path, the visual perception is also enhanced by closer spatial relationships that allow people on the path to hear and communicate with people on the beach, as well as become more aware of the sounds of the waves.

The pattern and scale of visible extents from each of the key transitional locations of principal built to access form, access form to the beach, and from private to public property is very different in Burleigh Heads when compared to the pattern and scale found in Broadbeach; there, the width of the access form separated the transitions beyond spectator viewing distances (Figure 4.3.2a).

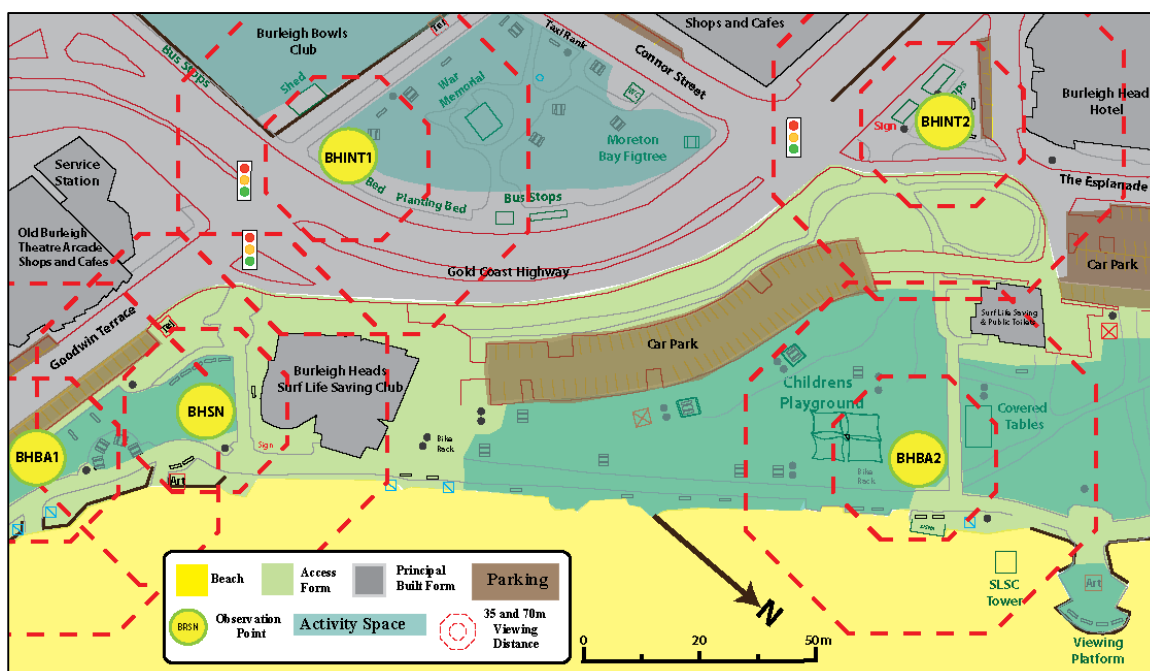


Figure 4.3.2a: View Distances from Transitional Observation Locations Burleigh Heads (Author 2013)

In Burleigh Heads the roads, buildings and routes create different visual spatial relationships between the transitional observation locations and the different forms that connect the principal built form to the access form and the beach. Two of the observation locations (BHBA1 and BHSN) are in a transitional space that contains and spans the principal built form through the access form to the beach. They include commercial edges to the public

space network that support extended stays. BHINT1 overlaps at spectator distance with BHSN, as do the locations of BHBA2 and BHINT2. This visual relationship of the different locations creates connections between the amenities and facilities close to those locations and the different forms of the beach precinct.

The patterns of visual connection within visually comprehensible distances in Burleigh Heads beach precinct is believed to be a very significant characteristic of place that may start to explain the popularity of this precinct. The patterns of visual connection, however, vary from location to location. For example, the visual connection pattern at the locations at Goodwin Terrace and Burleigh Heads SLSC are sufficiently different to produce different visual experiences.

The views from Goodwin Terrace are varied in nature with scenic views along the traverse path, a picturesque view along the coast to the Surfers Paradise high-rise skyline on the horizon, a framed view across the beach to the ocean, a view across the near urban landscape to the Burleigh Heads National Park in the background and a distant view across the foreshore park into the town (Figure 4.3.1b).

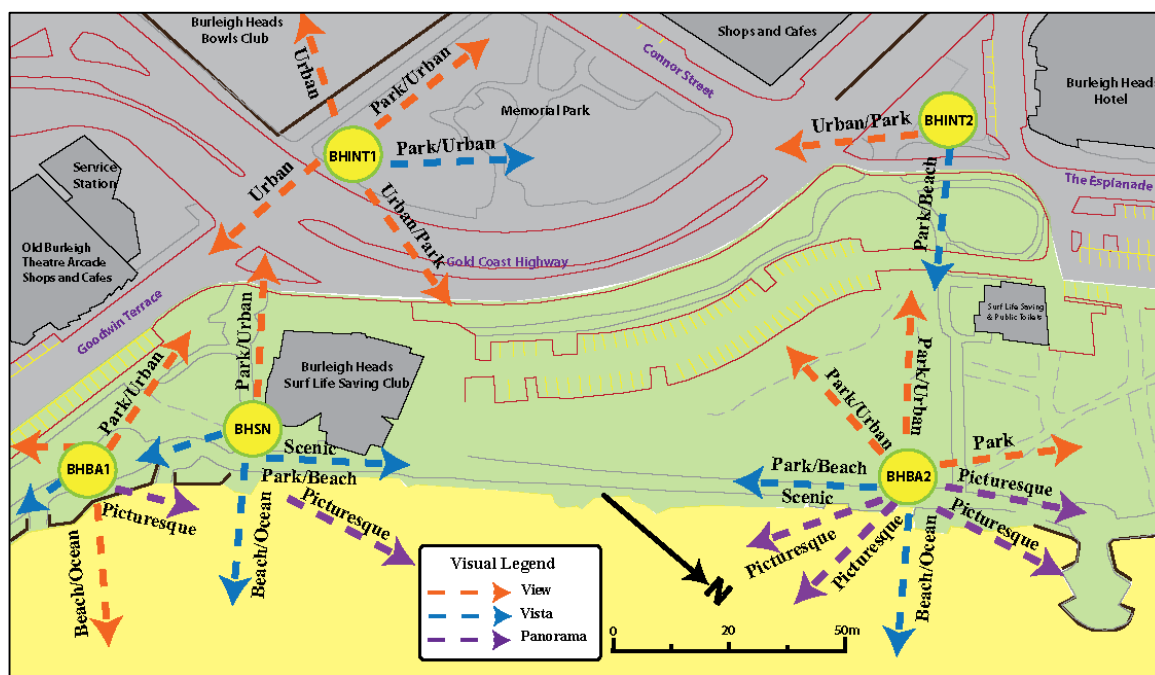


Figure 4.3.2b: Views from the Transitional Observation Locations Burleigh Heads (Author 2013)

From Burleigh Heads SLSC there are vistas along the traverse path past the SLSC building to the parkland beyond and past the prominent Oscars restaurant building on the foreshore to Burleigh Heads National Park. There is a view along the transect path to the crossing of the

Gold Coast Highway with Burleigh Hill on the horizon, and a picturesque view along the coast to the Surfers Paradise skyline and South Stradbroke Island on a clear day.

The quality of the visual connections from the foreshore park to beach transitional location of BHBA2 is exceptional, with attractive and interesting views in nearly all directions, except towards the toilet block/SLSC storage building and car parking. The views from BHBA2 are similar to the views from the Robert Gatenby Boardwalk in Broadbeach but, unlike those views, they connect to more people and features of interest. There is also less obstruction of views by buildings, dunal plantings and facilities and there is a deeper, more varied field of view in most directions with features in the fore, mid and background and at different depths from local to distant, far distant and horizon.

The views from the transitional location of The Esplanade (BHINT2) are dominated by traffic on the Gold Coast Highway, but there are a large number of people within view. However, there are distant views to Burleigh Hill and the beach and ocean. The spectator distance includes the edge of the car parks, traffic crossing and shops, offices, cafes and other businesses along the Gold Coast Highway and Connor Street.

Furthermore, the backgrounds from the The Esplanade location are varied and have a degree of human interest and landscape attraction. The view to the beach through the foreshore park is reasonably attractive and gives a sense of arrival at the beach for people from the traffic crossing and southbound bus stop close by.

The principal built form to access form transitional location of the Memorial Park (BHINT1) observation point has a theatrical distance that includes three distinct spaces: the Gold Coast Highway, the Memorial Park and the Burleigh Bowls Club. Views to the park are open but the Bowls Club is partly obscured by a shed and walls surrounding the club that separate it from the transect pathway. The shops and cafes along Goodwin Terrace and Connor Street can be glimpsed from the location, and the beach and ocean are visible either side of the SLSC building.

The views from the Memorial Park (BHINT1) location have different qualities dependent on the direction of view. Like the views from The Esplanade (BHINT2), the visual interest is varied at the location with a mix of people engaged in different activities at different distances and a variety of building types of different ages and building styles. This creates an interesting visual environment including distant views across the highway and park to the

beach and ocean, urban views along Goodwin Terrace and the Gold Coast highway, scenic views across the park to Connor and James Street, a park urban view along the transect path towards James Street and across the Bowls Club greens to distant apartment buildings and Burleigh Hill.

Public Access to Activity and Amenity at Burleigh Heads SLSC (BHSN)

As in the Broadbeach beach precinct, the lack of signage is a barrier to the public accessing activities and amenities in Burleigh Heads. However, Burleigh Heads does have shops, cafes, restaurants and a hotel along the roads surrounding the foreshore park that are within sight and easy walking distance of other locations in the precinct. This makes Burleigh Heads an easier place to understand visually.

The routes from the transitional location of Burleigh Heads SLSC are the traverse path straight onto the beach (BHSNS), inland along the transect path to Goodwin Terrace and the shops, cafes and restaurants of the Old Burleigh Theatre building (BHSNI). There is also a traverse path along the beachfront in the direction of Burleigh Heads (BHSND) and along the beach in the Surfers Paradise direction (BHSNU) (Figure 4.3.2c).

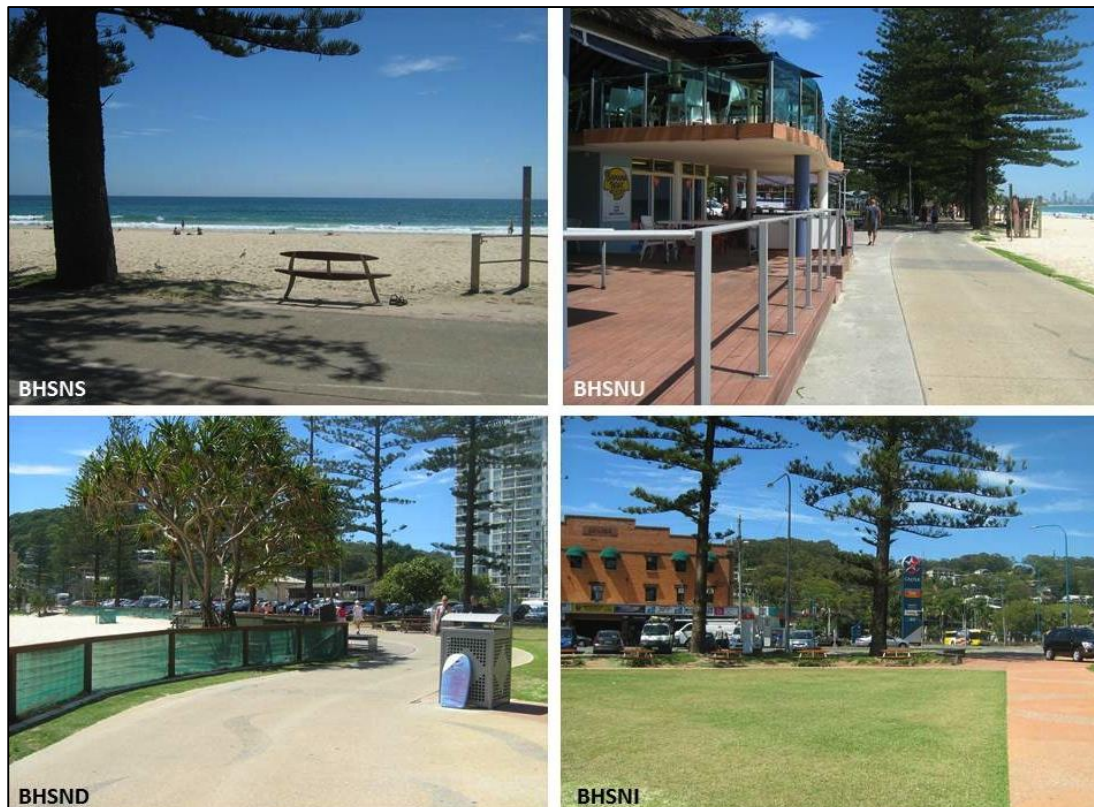


Figure 4.3.2c: Burleigh Heads Social Node (BHSN), Spaces, Routes and Limits (Author 2012)

There are benches and tables, seats, shower and bubbler, shade trees, grassed open spaces, public transport stop, parking, the SLSC building and bar, cafes, restaurants and shops visible from the location of BHSN as well as activities in the foreshore park, along the roads and on the beach. There is also an artwork of a surf board that hints at Burleigh Heads' importance as a surfing destination.

Public Access to Activity and Amenity at Goodwin Terrace (BHBA1)

The Goodwin Terrace (BHBA1) location has much of its available public space allocated to the wide, smooth, shared path. This, along with nearby parking and buildings along Goodwin Terrace, creates a clear movement space (BHBA1U, BHBA1D). This spatial allocation leaves less space for shade plantings and facilities in the remaining public space. The route inland is through the parked cars (BHBA1I). The access to the beach is through a wide, controlled access point equipped with spacious shower areas with some seating for viewing or to deposit bags and belongings whilst using the showers (BHBA1S), (Figure 4.3.2d).

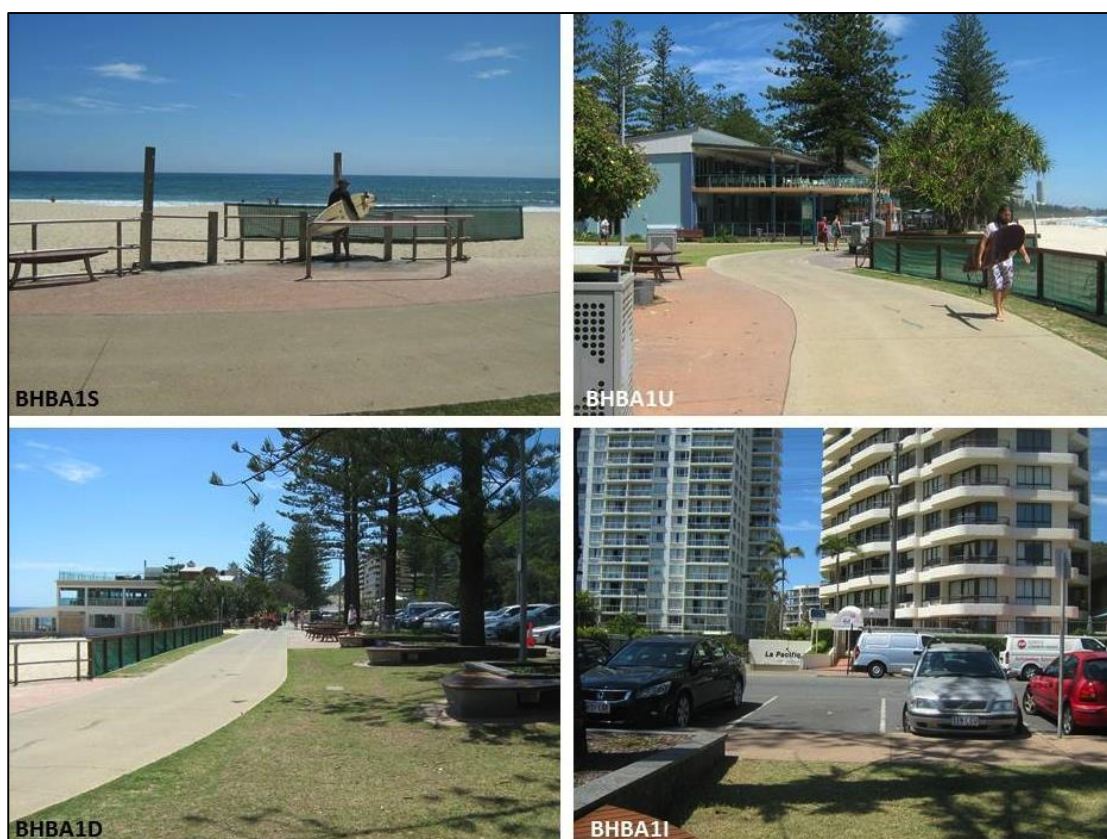


Figure 4.3.2d: Burleigh Heads Beach Access One (BHBA1), Spaces, Routes and Limits (Author 2012)

There are more people visible at spectator and far distances than at the theatrical distance of the immediate locality, which also indicates that the beach access location of BHBA1 is

primarily a movement-oriented space rather than an activity space. The narrowness of the open green space and the low numbers of places to sit in the shade may also play a part in people not stopping to enjoy the views along the coast.

The spatial arrangement of seating being directly opposite the showers at the beach access may also deter many people from stopping to enjoy the views. This is because they may feel they are intruding when people are showering. This situation leads to people using the seats opposite the fencing, along the beach, that do not have clear views above this fencing, thereby limiting the benefits of a spectacular location.

The location of the beach access at Goodwin Terrace is unidirectional along the traverse path and logically disconnected inland, reinforcing the sense of being in a channeled movement space. People with movement impairment or with young children are restricted in their route and activity choice to walking along the path, stepping off to rest, view, eat and drink in limited spaces that are unshaded.

Public Access to Activity and Amenity at Children's Playground (BHBA2)

The spatial arrangement of spaces, routes, facilities, activities and amenities at the children's playground (BHBA2) location is the most amenable to public access found during the research. This transitional location challenges the original research assumption that the social node is located at the facilities available to the public at a SLSC building (Figure 4.3.2e). Indeed, for a beach precinct, the characteristics of a social node along the beachfront, according to the popularity of BHBA2 for movement and social activity, would instead appear to be related to the physical arrangement of routes, spaces, facilities and amenities that create direct visual, physical and symbolic connections between the foreshore park and the beach.

The attribution of the children's playground (BHBA2) location as a social node is supported by more people being visible within a theatrical distance, fewer at spectator distance and yet fewer at far distances in a place with clear sightlines in most directions extending from the locality to the far distance. There is shade where it is needed and nearly all the public facilities required to support extended stay are visible within spectator distance, except for those found along The Esplanade, which is blocked by the SLSQ building (BHBA2I).

Nearly all the categories for movement and social activity in public spaces, including beach specific activities, were observed at the location of BHBA2. There are short routes between

spaces and facilities with no dead ends and good, logical, visible connections between the location and destinations in the rest of the beach precinct. However, the problems found at all the transitional locations in the study of shared path use; traffic-oriented lighting and the lack of signage for people visiting the beach precinct are present here.



Figure 4.3.2e: Burleigh Heads Beach Access Two (BHBA2), Spaces, Routes and Limits (Author 2012)

The design of the edge of the traverse path along the beach is an outstanding example of a restorative place that bridges the transition from beach to foreshore parkland. The nature of the design invites the visitor to stop and linger and allows family groups to engage in different park and beach activities whilst remaining in sight of each other (BHBA2S).

The traverse path along the beach towards the SLSC is wide enough for two couples to walk past each other and not as wide as those paths in other precincts inspired by the shared path philosophy. This is probably because it was built and designed before the Oceanway was conceived. The Norfolk Pines and facilities in the foreshore park appear to have prevented shared path widening (BHBA2D). However, the traverse path in the Surfers Paradise direction has recently been redesigned to comply with its role as a ‘smart transport’ initiative (BHBA2U).

Public Access to Activity and Amenity at BHINT1

In common with most movement priority spaces at the transitional location of the Memorial Park (BHINT1) there are more people visible at spectator and far distances than within the immediate theatrical distance. Beach specific activities are out of sight, although the ocean can be glimpsed. There are some people engaged in social activities in the Bowls Club and Memorial Park open spaces and in the far distance people can be seen along Connor and James Streets (Figure 4.3.2f).

All the destinations generating foot traffic are at a distance from the location and this generates a continuous flow of people to the traffic crossing. The crossing is controlled by lights but the time allocation favours traffic. It would be difficult for a person with sight or mobility impairment to cross the eight lanes before the lights change. The audible signal did not seem to be working at the time of observation. The division of spaces into road, park and club does not allow for easy transitions between facilities, activities and spaces.



Figure 4.3.2f: Burleigh Heads Intersection One (BHINT1), Spaces, Routes and Limits (Author 2012)

There are some facilities visible at spectator and far distances including seating, bench and tables, shade trees, bus stops, bins, parking, the service station, cafe and SLSC building

although they may not all be clear to people with vision impairment. There is shade, but not always in the right place to support walking, especially along the roads (BHINT1S, U and D)

Public Access to Activity and Amenity at The Esplanade (BHINT2)

The transitional location of The Esplanade (BHINT2) has as many people visible within theatrical distance as the spectator distance, and significantly fewer at far distances. This is probably due to a combination of factors. The location means that people travelling by public transport are waiting at bus stops so they remain in place.

The walking routes in the location of the observation point of The Esplanade (BHINT2) branch out from the traffic crossing, and include dead ends in flower beds and route directions away from desirable pathways. This can be seen in the crossing from the hotel which ends in a flower bed and car park (BHINT2I). The flower bed is used to direct people along the path towards the beach, whereas some people may prefer to head for the facilities around the children's playground in the foreshore park (BHINT2S) (Figure 4.3.2g).



Figure 4.3.2g: Burleigh Heads Intersection Two (BHINT2), Spaces, Routes and Limits (Author 2012)

The design of the hotel and buildings along the slip road from the Gold Coast Highway present blank or closed off facades that are unwelcoming (BHINT2I) and the distance across

the Highway combined with the crossing time would make it a difficult crossing for someone walking more slowly than average walking speed (BHINT2D).

The traffic crossing channels people using the foreshore park and beach and from inland destinations. Fewer people are visible at a far distance as a consequence of the location of all the buildings and plantings which are within spectator distance and the obscured sightlines beyond that distance. Because of the topography of the place, people and activity on the beach are also not visible from The Esplanade (BHINT2) location, although the ocean is visible through the foreshore park.

There are however, a number of facilities and activities visible from the location and this, along with the bus stop, makes the location feel connected within the precinct and beyond. However, a specific gateway design for an arrival, organize, wait and meet place is a recognisable improvement that could inform and support beach visitation by visitors.

The six-lane Gold Coast Highway, fractured path and road designs with route dead ends, traffic priority at crossings and changes of level could also be improved to facilitate walking. The experience of arrival and transition from street to park could be improved, especially for those people who are unfamiliar with the beach precinct or who have mobility or perceptual impairment.

4.3.3 Mermaid Beach

The Visible Extent from the Transitional Locations in Mermaid Beach

The visible extents in Mermaid Beach are created by the demarcation of public and private property, with private property dominating the types of views in the precinct. The regularity of the distribution of the observation points is governed by the street pattern rather than the location of the SLSC buildings, car parks and facilities in the foreshore park, as is the case of the other two study areas of Broadbeach and Burleigh Heads.

Along Hedges Avenue, MBINT1, MBSN and MBINT2 are all within spectator to distant view of each other. Along the beachfront MBBA1 and MBBA2 are distantly visible to each other, although the private residences along the beachfront obscure connection from MBBA1 to MBINT2 and from MBBA2 to MBSN and MBINT1 (Figure 4.3.3a).

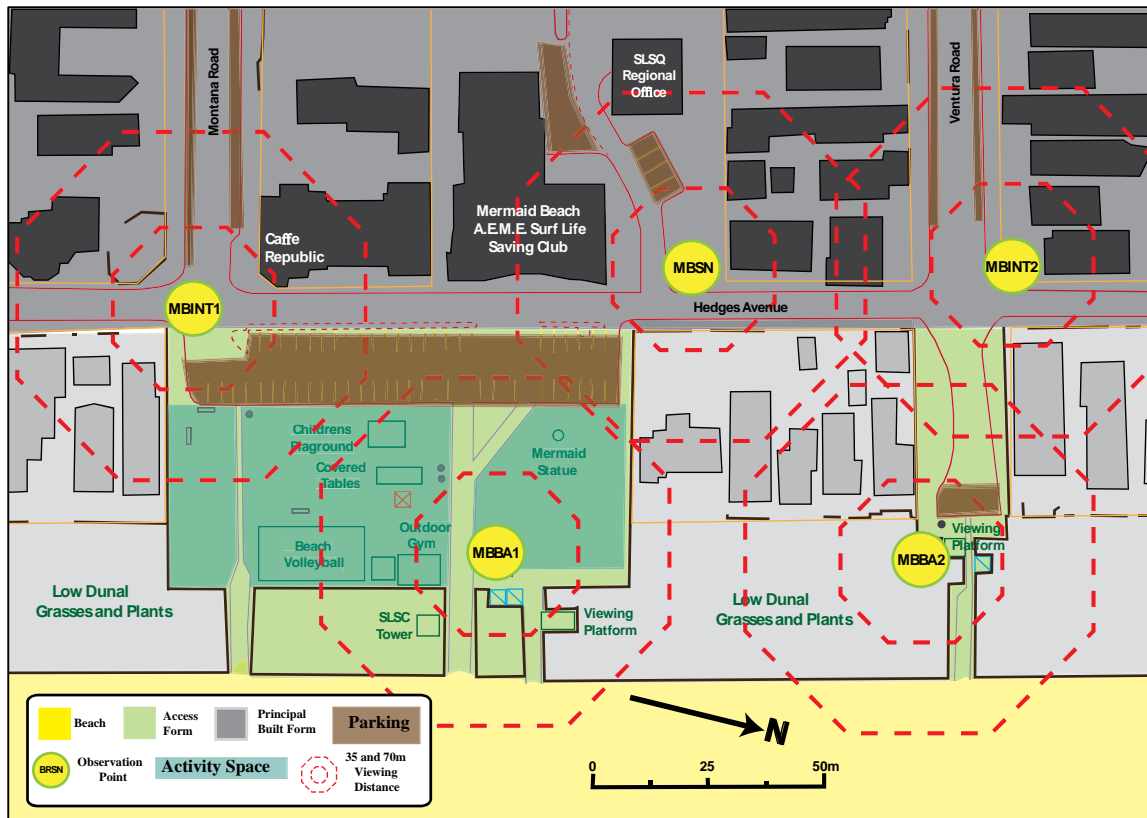


Figure 4.3.3a: View Distances from Transitional Observation Locations Mermaid Beach (Author 2013)

The allocation of space to private use in this precinct affects the meaning of accessibility in an interesting way. Urban design guidelines for development regularly cite the block size as a measure of accessibility or permeability of places (Steiner and Butler 2007). In Mermaid Beach, the block distance between the roads of between 60 to 90 metres would generally be considered within the desirable range along Hedges Avenue, but the length of the roads to the Gold Coast Highway produces a block size of around 275m, which most authors would consider undesirable (Burton and Mitchell 2006, Llewellyn Davies 2007).

However, block size is largely irrelevant within the case study area of the Mermaid Beach precinct compared to the nature of the transition from private to public space. This transition is dominated by substantial private facades with low window incidence. The only commercial presence in the precinct is the Caffe Republic, which has good permeability, and Mermaid Beach SLSC building, which has a poor permeability to the street. Considering that the precinct is in a suburb where there are no other commercial destinations near the beach, the nature of the public to private transition in Mermaid Beach is a clear signal to visitors to stay away.

The pocket park beach access locations of MBBA1 in the foreshore park and MBBA2 in the stub access from Ventura Road have similar views to the beach and ocean. From the observation points along Hedges Avenue there was little to recommend taking any photographs, unless the observer was intending to record examples of poor urban design or use them for real estate purposes. There are long straight views along the roads with the only one of any merit being an urban vista towards the Broadbeach and Surfers Paradise skyline.

The transitional location of the Ventura Road/Hedges Avenue intersection (MBINT2) has particularly unattractive views along the roads except for the horizon view of the Gold Coast hinterland past the very distant Gold Coast Highway (Figure 4.3.3b). The views from the two beach access points of the beach access pocket park (MBBA1) and Ventura Road beach access (MBBA2) are similar except for this hinterland horizon view inland from MBBA2. The picturesque views from these locations would also be shared by the adjacent beachfront homes and those views would be enhanced from elevated decks or second floors balconies.

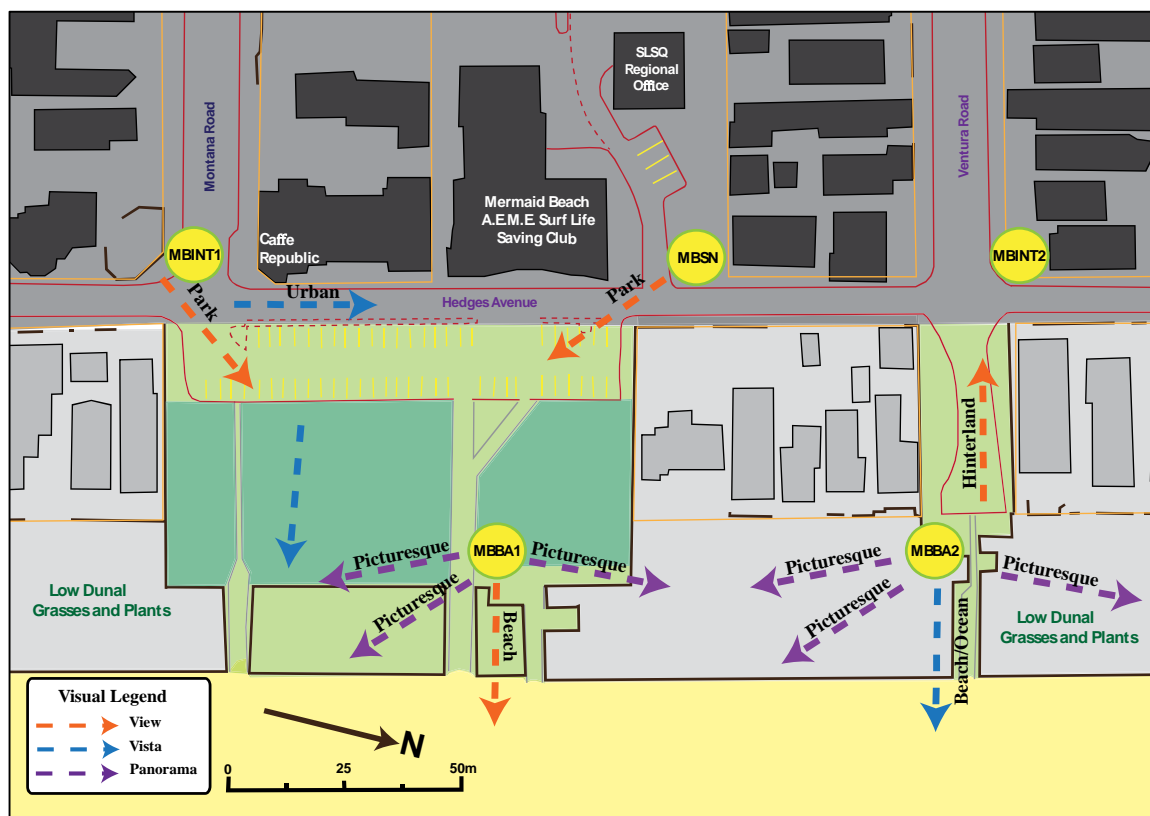


Figure 4.3.3b: Views from Transitional Observation Locations Mermaid Beach (Author 2013)

There are picturesque views in the precinct from the pocket park (MBBA1) and Ventura Road beach access (MBBA2) locations. These are across the dunes south towards Burleigh

Heads in the very far distance; there is another view across the dunes past scattered Pandanus trees to the south east towards Coolangatta on the horizon; there is also a panoramic view, on a clear day, along the dunes past Broadbeach to the high-rise skyline of Surfers Paradise and beyond to the horizon and South Stradbroke Island. These picturesque views are of course most clearly enjoyed by beachfront residents.

Public Access to Activity and Amenity at the Mermaid Beach SLSC (MBSN) Location

The public realm network at the Mermaid Beach SLSC (MBSN) location is dedicated to vehicle and cyclist movement with minimal public walking space. The routes from the transitional location of MBSN include a pedestrian crossing route across Hedges Avenue to the pocket foreshore park (MBSNS). The very narrow shared walking routes along Hedges Avenue are sometimes obstructed by poles (MBSND). There is also no shade or seating along the routes (MBSNU). There is a narrow path alongside the SLSC building to the toilet at the rear of the SLSC building. There is also a route through parking along the road past the Regional Surf Life Saving building to Mermaid Park (MBSNI) (Figure 4.3.3c).



Figure 4.3.3c: Mermaid Beach Social Node (MBSN), Spaces, Routes and Limits (Author 2012)

The lack of any signage and information useful to a visitor in the Mermaid Beach precinct is similar to the other beach precincts. Even though there is less to do and fewer places to go in

Mermaid Beach, it would be useful if there was information at a walking scale for visitors about the precinct. Information could be located at the likely arrival points for visitors of either the entrance to the foreshore park or outside the SLSC building. This information would assist a visitor to find the toilets and the hidden-from-view Mermaid Park facilities.

Public Access to Activity and Amenity at the Beach Access Pocket Park (MBBA1)

The spaces around the transitional pocket park beach access location of MBBA1 are defined by the walls along the private residences on either side of the park, the dunal fencing and the car park and fencing. The few people visible from the location were only within theatrical and spectator distance as no people can be seen beyond that distance inland.

The routes within the park are across open grassed spaces. The route to the beach is along the fenced pathway (MBBA1S) and inland along a path that is wide enough for the SLSC utility vehicle and tractor from the car park (MBBA1I). There are no routes available along the beachfront through the dunes, although they are publically owned and desirable, as they are fenced off to enclose the park (MBBA1U). Although the location of MBBA1 is in a pleasant park and visually connected to the ocean, SLSC and the Caffè Republic, as well as, on the horizon, to other places along the coast. The connection inland through the car park inland is through a jumbled vehicle dominated space (MBBA1D (Figure 4.3.3d).



Figure 4.3.3d: Mermaid Beach Access One (MBBA1), Spaces, Routes and Limits (Author 2012)

Public Access to Activity and Amenity at the Ventura Road Beach Access (MBBA2)

Although the location of the Ventura Road beach access (MBBA2) is in an open space with views to the horizon towards the beach and ocean it is a tightly enclosed unsheltered space with only two route options. There is a narrow, soft sand path to the beach which can be steep near the beach (MBBA2S) and a route inland along Ventura Road through a car parking space (MBBA2I). Along the foreshore dune the beachfront is fenced off for the public although open to beachfront residents (MBBA2U, MBBA2D (Figure 4.3.3e).



Figure 4.3.3e: Mermaid Beach Access Two (MBBA2), Spaces, Routes and Limits (Author 2012)

There is no lighting at the location making it a daytime-only beach access point. At the entrance to the viewing platform at the transitional location of MBBA2, there is a lone direction sign above the beach flag with: ‘Ventura Road, Surf Tower, and Seaway 11.8 km / Point Danger 23.3 km’. This may be informative of location and useful for cyclists and drivers but of little use to a walker. At the time of observation there were no people visible at any distance from this location, indicating a very lightly-used, isolated place. There may have been people in the homes and on the beach although plantings, screens and the dune profile obscured them.

Public Access to Activity and Amenity at MBINT1

The route to the foreshore park and beach at the location is not designed for people walking from Ventura Road, but for vehicles from Hedges Avenue (MBINT1S). There is very little shade and nowhere to stop and rest either along Hedges Avenue (MBINT1U, MBINT1D) or Montana Road (MBINT1I). The shared paths are narrow, close to traffic and often in poor condition, obstructed and crossed by driveways that emerge from homes behind high walls, garden plantings and gates (Figure 4.3.3f).



Figure 4.3.3f: Mermaid Beach Intersection One (MBINT1), Spaces, Routes and Limits (Author 2012)

The Ventura Road location is a space that can be a social and movement space when the cafe is open for people to eat, sit, drink, watch others pass by and enjoy limited views to the park and the far distant ocean. If the cafe is closed there is no reason for people to linger in the location as there are no facilities to support activities. Without the distant view of the park and ocean, the location is one of an ordinary suburban residential street. Even with the distant views, the jumble of concrete path, asphalt, paving, power-lines, parking and traffic signs is an unattractive place to walk.

Public Access to Activity and Amenity at the Ventura Road Intersection (MBINT2)

The intersection of Hedges Avenue and Ventura Road (MBINT2) would be considered a poor streetscape in a general urban environment. There are no spaces, facilities or amenities that would tempt anyone to stop or pause here. Indeed, the researcher had more inquiring looks from passers-by than at any other location in the study. Drivers, cyclists and walkers all noted the presence of the researcher sitting on the side of the road feeling exposed and out of place.

The public space at this location is entirely dedicated to movement and the design is repeated at all the other Hedges and Albatross Avenues intersections in the suburb of Mermaid Beach, away from the pocket foreshore park. The location feels like a place designed to exclude the outsider. The homes along the streets allow residents to observe without being seen. The routes are restricted to roads and as at MBINT2, the pathways are poorly lit, narrow, close to traffic, in poor condition, obstructed and crossed by driveways. The location was one of pathways with no obvious destinations (Figure 4.3.3g).



Figure 4.3.3g: Mermaid Beach Intersection Two (MBINT2), Spaces, Routes and Limits (Author 2012)

4.4 Diversity, Human Scale and Needs of the Restorative Beach Precinct

The previous three sections have described the nature of the visual extents of walking in the different beach precincts and the accessibility of activity, facility and amenity in the spaces, places and routes found in them. This section will report on the diversity, human scale and needs of the restorative environments at the transitional locations of the beach precincts.

It had been noted in the review of the design guidelines (see section 3.2.3) that the different attributes, characteristics and values describing desirable urban design properties of place often overlapped. When applied to the analysis of place they appear to lead to a degree of repetition of the description of characteristics of urban design attributes. This has also been true in the urban design walk-through analysis conducted by the researcher. It is thought that this is due to the very inter-dependent and inter-changeable relationships of the different attributes, characteristics and values of urban spaces and places (Mumford 1961).

This situation means that many of the values and relationships of the different spaces and places of the beach precincts in this study have already been described in the previous sections of the typological (Section 2.4) and walk-through urban design analysis (4.1/2). The final section of the urban design analysis has been redesigned in order to avoid repetition of the descriptions of the characteristics of visual extents, the urban design principles of governance and accessibility that also apply to the requirements of a restorative place and the urban design principles of diversity and human scale and need.

The analysis of governance and accessibility tended to indicate that these are the most important urban design principles of good urban design. If there are flaws in achieving the desirable attributes, characteristics and values associated with these principles, the design principles of diversity and human scale and need that cascade from them are less relevant. Or as Bentley *et al.* (1985: 9) observed when discussing modern urban design: ‘paradoxically, designers failed to realise that the built environment is a political system ‘in its own right’: try walking through a wall, and you’ll notice that it is the physical fabric, as well as the way it is managed, that sets constraints on what you can and can’t do’ (Bentley *et al.* 1985).

The political decisions made in the governance of the beach precinct to favour use and activity determines the degree of diversity allowed in its different spaces and transitional locations. The way use and activity are spaced and arranged directly affects people’s perceptions of place and what opportunities and choices are supported. The design of the

public space network and its transitional spaces to suit particular project groups (drivers, cyclists, local residents, surf-lifesavers) and the preferences for activity and access to amenity in the provision of facilities, determines the levels of inclusion and exclusion of other demographic and activity groups. Without inclusive design practices, public places can only be attractive, social and safe spaces for those who are favoured (Ovstedal 2008).

The previous sections have already reported on many of the characteristics of the urban design principles of diversity and human scale and need. For example, in describing the characteristics of accessibility, the distance of the facilities and activities from transitional locations are related in terms of the visual perceptive distances of theatrical, spectator and distant. These distances then directly relate to the level of comprehension and interaction of human scales of understanding of the local environment and determine what activity and use is perceived to be possible in the locations, spaces, routes and facilities in the public realm.

This section will report on the walk-through analysis's empirical observations conducted from the transitional locations of the beach precincts and the overall degree of diversity that meets the human scale and needs of a walking visitor to the beach precinct. It will relate that to the inherent requirements of a restorative environment for 'being away', 'fascinating' and 'compatible' (Kaplan 1995) which can be seen as primary reasons for people of all ages, identities and interests to live in or visit beach precincts.

The urban design principle of governance is about how the locality has been arranged to be available and suitable for people to walk in. The urban design principle of accessibility is about where people can and cannot go and how easily they understand the choices on offer in the public space network. The urban design principle of diversity is about what people can do in the locality. The urban design principle of human scale and need is about how it feels to be there. These are characteristics related to the unique nature of a restorative beach precinct.

The nature of the restorative beach precinct is determined by the extent of peoples' visual, physical and symbolic connection to the natural environments found in beach precincts: the park, the beach and the ocean. The visitor's usual, urban environment contrasts with the unique adjacency of urban area, park, beach and ocean. The fascination and compatibility of beach precincts is related to an environment that allows the physiological and psychological human needs to be met at a scale which enable rest, relaxation, activity and enjoyment in an environment with the amenity of views.

These unique characteristics of beach precincts belong to an environment capable of restoring the biophilic (Wilson 1984) and topophilic (Tuan 1974) connection for people. The focus for the dimensions of diversity and human scale and need found in beach precincts are based on the use of these unique adjacent environments and the transitions between them.

The way the urban design solution allows different groups of people to meet their needs for a restorative connection to nature is assumed to be responsive to their individual desires, expectations and preferences when visiting the beach for a diverse range of different activities and behaviours (Canter 1983). However, it is also assumed that the primary reason that people visit a beach precinct is for its attraction as an urban place, adjacent to the beach and ocean, restorative for the body and mind (Berman, Jonides and Kaplan 2008).

This leads to a propositional construct that there is a set of decisions that people will make that are not related to the way professional urban design and planning guidelines have ordered the attributes and characteristics of beach precincts. Instead, a proposed set of urban design principles that most likely influences the decision for visitation for most visitors would be that the beach precinct is inviting, safe and comfortable for visitation. People are not thought to willingly visit an unattractive, unsafe place incapable of meeting their needs for sociability and activity.

This has led to the author's reconsideration of the relationships of the attributes of restorative environments, diversity, human scale and need which were selected for a walk-through urban design analysis of beach precincts. Instead, the attributes of the urban design principles of a restorative, diverse beach precinct that meets human needs can be regrouped to describe the reordered urban design principles of inviting, secure and comfortable:

- **Inviting** as 'being away' from the usual urban environment, in a sensually attractive, restorative environment with characteristics of place that allow for people to be fascinated by the forms and locations of the beach precinct, inviting people to visit, stay or linger, in a:
- **Secure** beach precinct that is a place to visit, related to the environmental design of places and spaces to be considered as safe, supported and compatible with intended behaviours and activities for egalitarian use; and

- **Comfortable**, finally, people are assumed to prefer a place that allows them to choose a comfortable degree of social interaction with others, with the opportunity and choice of appropriate activities suited to the purpose of visit.

This reordering of the attributes of the selected urban design principles of the study is shown in the following diagram (Figure 4.4). The terms of inviting, secure and comfortable are seen as more appropriate for the urban design walk-through analysis of the beach precinct.

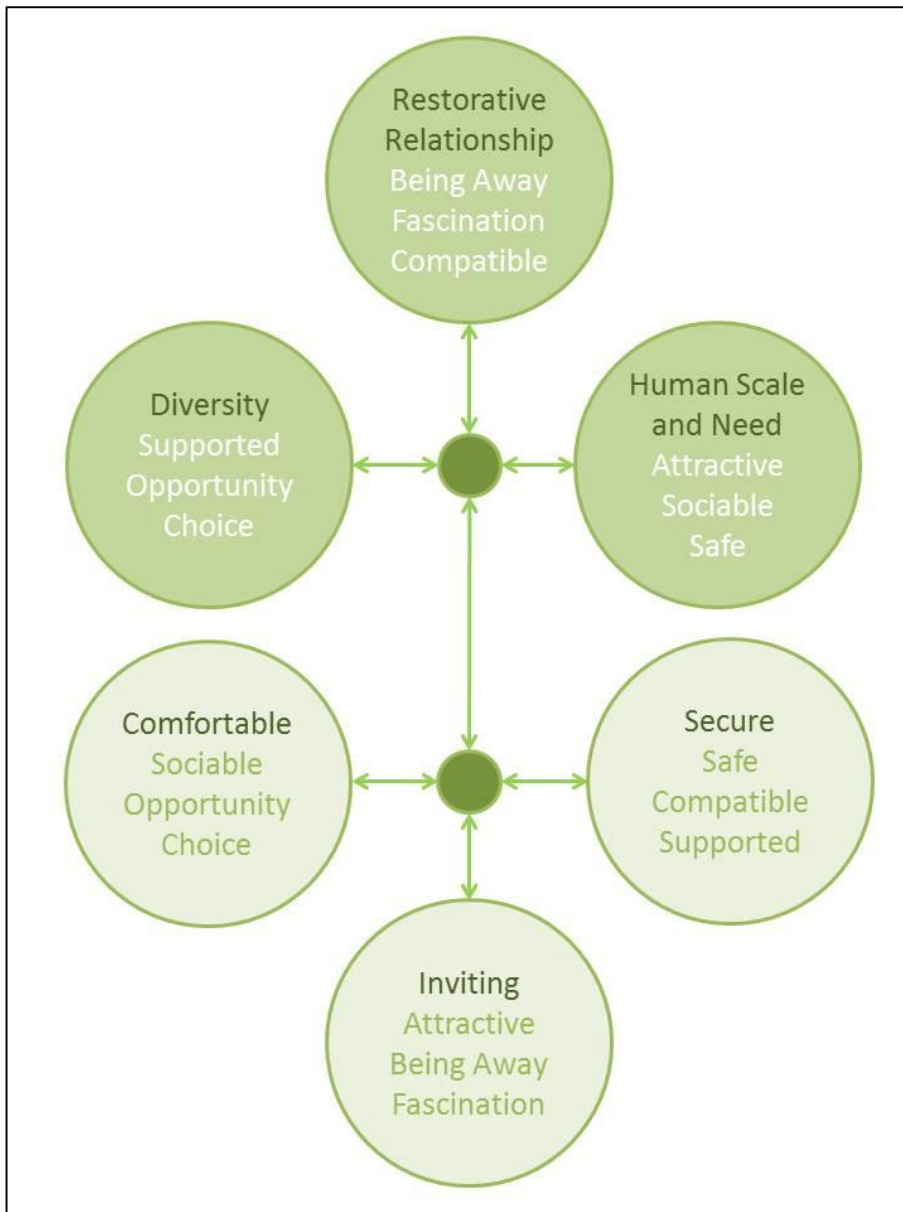


Figure 4.4: Reordering the Attributes of the Urban Design Principles (Author 2013)

We now move to the walk-through urban design analysis of the locations in the different beach precincts using the new urban design principles of comfortable, secure and inviting.

4.4.1 Broadbeach

Broadbeach, as a restorative place, is very pleasant in some areas, but there are also mundane, dreary, prosaic or banal elements in all the locations observed, due to unattractive buildings and infrastructure in the park and in the adjoining principal built form (Figure 4.4.1a).

The sense of invitation to ‘being away’ is very conditional on the location and the direction you are facing. The precinct relies on the open spaces and of the foreshore park to be attractive to the walking visitor, as the dune plantings visually disconnect the principal built and access forms from the beach and ocean. The Broadbeach social node (BRSN) appears to be the only location in the precinct that meets Kaplan’s condition of ‘being away’ from the stresses of an urban lifestyle as an idyllic natural destination along with the beach itself.



Figure 4.4.1a: *Idyllic, Mundane, Dreary, Prosaic and Banal Locations in Broadbeach (Author 2012)*

Broadbeach is different from other places on the Gold Coast by virtue of the size of the foreshore park, dunal plantings and the width and shape of its beach. The location does have some memorial plaques that are informative of some parts of its history, but more could probably be done to inform visitors of its recent uses as a feasting ground of the Kombumerri

people, as part of the timber-getting history of the Gold Coast, recent sand mining and its part in the development of the city (Gold Coast City Council 2013a).

The degree of fascination in Broadbeach directly relates to the accessibility of views from different locations. The location at BRSN is organized and oriented to take advantage of the views to the ocean, along the beach and within the park and it is a very suitable place to pause and relax, watch others and enjoy the views (Figure 4.4.1b).

Although the seating is designed to view both ways, most people are found to be either seated or standing facing the ocean. People often walk to the boardwalk, look at the views, take a photograph and walk away within a few minutes. Less people stay or sit down, indicating that the lack of other proximate activities restricts the attraction of the location. The boardwalk is a pleasant location in fine weather, although there is little shelter from any wind or rain.



Figure 4.4.1b: The Transition from Foreshore Park to Beach at the Broadbeach Social Node (Author 2012)

The immediate surroundings of the Robert Gatenby Boardwalk (BRSN) location are suitable for use by different ages and for different purposes. The Boardwalk clearly acts as an anchor destination with the views to the beach and coastline being the major attraction for visitors from the Mall. The intersection of the traverse and transect paths dominates as a movement

space on the park side of the location. There was some crossing conflict observed at the junction between cyclists and walkers when it was busy. The cycle traffic and lack of suitable lighting at the (BRSN) location detracts from the sense of safety at the location and would make the boardwalk a potentially dangerous place at night.

The public facilities in the foreshore park are too far away to be supportive of social activity at BRSN and the boardwalk is the best place in the precinct for people to sit, socialise, read, rest and shelter from the sun. The siting of amenities, facilities and buildings in Broadbeach affect each location's social and functional use. Most of the activity on the beach and along the shore can be obscured by the dunal profile from the boardwalk.

The facilities on the boardwalk are mostly well constructed from timber and steel, with recently installed, stainless steel showers that have taps and bubblers. The location appears to be regularly cleaned, no litter was observed and there seem to be an adequate number of bins.

Although the dune cuts the visual connection to the beach and ocean it does provide some shelter from the prevailing coastal winds in the parkland. The Casuarina trees which are very tolerant of coastal winds also provide scattered shade along the dune ridge, but the needles and small fruits they drop are sharp and not suitable for walking on barefoot, sitting on or for spreading a blanket for a picnic.

There is shade where it is needed, although the only shelter is at a distance. It is not known if this situation relates to the Paula Stafford memorial dedicated to a local business figure associated with a 'Shade Trees for Cancer' fund. There is also a 'Green, Gold and Blue' metal artwork of a mother and child with longboard near the boardwalk, commemorating a hundred years of service by the local Rotary club in 2005 (Figure 4.4.1c).

Despite having the best visual and physical connections to the beach and ocean in the precinct, extended stay does not seem to be supported by public facilities at the (BRSN) location. There is nowhere to get food or drink except in the SLSC building and only if you know how to access it. Toilets are not visible and there is no signage for local facilities beyond the immediate locality. There is little else to do in the location of BRSN beyond the boardwalk or beach and the distance from the shopping mall means that the location feels slightly isolated and exposed at the same time. The open spaces in the park and on the beach could, and do, support markets and temporary buildings.



Figure 4.4.1c: View from the Boardwalk to Park in Broadbeach (BHSN) (Author 2013)

The location of boardwalk at BHSN is set too far back to fully enjoy the available views because of the profile of the beach. The position of the viewing stand on the front edge of the dune during the 2012 SLISA Championships probably indicates the optimum location to observe activity on the beach, in the ocean and to enjoy the panoramic views along the beach towards South Stradbroke Island and Tweed Heads (Figure 4.4.1d).



Figure 4.4.1d: Viewing Stand on the Beach in front of BHSN during the SLISA Championships (Author 2012)

At the location of BHSN, lighting is oriented, as it is in most places in the Gold Coast beach precinct, to cycling not walking. This means that the locations throughout the precinct will feel less safe in the early evening and at night especially to women, children and older adults. There are hiding places along the transect path to the shopping mall in the plantings along the SLSC car park and the fenced foredunes, and along the traverse path amongst buildings. There are no visible security systems or feedback system to report problems to responsible authorities.

In contrast to the location of Kurrawa SLSC (BRSN), the arrangement of public space and the location of facilities and buildings in relationship to the amenity of views tend to deter casual users from stopping, and so the location has no social function. There are vistas along the traverse path into the foreshore park in the distance, and along the beach access path, including a glimpse of the beach and ocean and views towards the beach and the boardwalk, but it is not a place to linger (Figure 4.4.1e).



Figure 4.4.1e: The View towards the Kurrawa SLSC Building from BRBA1 (Author 2012)

The traverse path is lightly-used to busy but there are no gathering spaces equipped with public facilities for viewing, seating, resting, shelter or shade. Because people move quickly through the location, there is a potential for conflict in the public space and inside or around the toilet building, which are hidden from public view. The locality is clean and well

maintained by the council, with no visible vandalism or graffiti. The adjacent places could be used for ball games and other temporary uses, but this was not observed.

The location acts to connect the car park, beach, SLSC and nearby children's playground, rather than provide spaces for activity. Because of enclosure and isolation from the rest of the precinct, the location is potentially dangerous and would benefit from the installation of closed circuit television, an alarm and emergency phone, particularly as toilet blocks are a known source of diverse social problems (4.4.1f).



Figure 4.4.1f: The View inland from BRBA1 past the Toilet Block and through the Car Park (Author 2012)

The lack of activity other than movement, the poor lighting, no passive surveillance, obstructed sight lines, opportunities for concealment along the path in the fenced dunal area and amongst the buildings, make this location potentially dangerous for children, women and older people in particular and deter any other form of activity at the location other than moving through, especially at night. The location also indicates that the presence of trees and open grass areas is not enough to make a place attractive for people to stay.

The foreshore park inland of the northern park beach access (BRBA2) would be pleasant for a city park but it is disappointing for a foreshore park adjacent to a wide beach. There is no incentive to linger at this beach access as there is little visual connection between the

parkland and the beach. The walking environment is pleasant between the dunal and park plantings but the location is a move-along, not a rest, stay-and-enjoy place. The only bench table in the vicinity is unshaded and lying down at this location would probably feel uncomfortable and exposed (Figure 4.4.1g).



Figure 4.4.1g: View towards the Resort Towers across the Foreshore Park from BRBA2 (Author 2012)

Although distant from the traffic on Old Burleigh Road, the open space allows traffic sounds to carry through the park. People may want to take pictures in and across the park to urban views of the principal built form and along the traverse path, which is framed by dunal and park plantings, but they would only get a glimpse of the beach and ocean down the beach access path through the dunes.

There are a lot of cyclists and wheeled vehicles using the traverse path. The location is also poorly lit and too far away from any buildings to feel entirely safe, especially at night. Although it is unlikely, there is a potential for conflict with other people using the location and, if any incident occurred, help would not be quickly available. The clear sightlines are oriented along the traverse path and into the foreshore park, but there are opportunities for concealment in the dunes and plantings along the pathway.

The nearby National Service Memorial has also been subject to vandalism. There are no places to sit and rest along the traverse pathway and the sense of isolation could be a problem for people walking along the path. The traverse path design itself is more like a road than a pedestrian pathway.

There is some potential to improve the sense of arrival in the precinct, as the Kurrawa SLSC building starts to be visible at the location of the beach access onward. This could be achieved by the provision of a landmark facility at the beach access, combined with shelter/seating and information boards. This could also be a rest, meeting, organize, change and inform facility. The pathway could also divert around the facility (Figure 4.4.1h).



Figure 4.4.1h: View from Broadbeach Beach Access Two (BRBA2) along the traverse path (Author 2012)

The degree of fascination at the intersection of the transect path with access and built forms of the Broadbeach Mall (BRINT1) location is dependent on the direction the walker is facing. Moving towards the park or the boardwalk, there are some pleasant views, although the views to the right are to a partially screened car park and the rather unattractive Kurrawa SLSC building. People might use the shaded seating on the park side of the traffic crossing to meet people or rest, but otherwise there is little to tempt pausing or staying in place at the location.

For an urban setting the Broadbeach Mall (BRINT1) is tolerable but traffic tends to dominate the senses the closer you are to the road. There is a distinct division of space between urban use and the park, and a degree of arrival once across Old Burleigh Road, with the built form behind and the parkland in front. The apartment towers also tend to loom over the location and people have to lean back to take them in as they get close (Figure 4.4.1i).



4.4.1i: The Entry to the Oasis Shopping Centre from Old Burleigh Road (BRINT1) (Author 2012)

Although the foreshore park near the location is known locally for events and markets, there are no advertisements for them. The need to reserve clear open space for these events may also be inhibiting its use for other activities. The street furniture looks worn and dated. There is no obvious surveillance or security in the foreshore park, although there are probably private systems in the adjoining resort towers. The locality does not feel particularly safe as it is poorly lit and isolated from the adjoining buildings. It would probably be avoided at night by women and older people.

The dominance of the road and resort towers found at the Broadbeach Mall (BRINT1) location continues at the transitional location of Albert Avenue (BRINT2). Indeed, there is an even more distinct separation of environments at this location. The closer you get to Old Burleigh Road, the more it is dominated by traffic sounds and smells, parking and the high

walls of the resort development, making it an unlikely place to linger. At the Albert Avenue (BRINT2) location the views are similar to those found at the Broadbeach Mall (BRINT1) location, but there is less view obstruction to and through the park.

The direction that the visitor faces also influences the senses at this location. The inviting views from the urban form offer some glimpses of the beach and ocean along the traverse path. There is also activity in the children's playground. The long urban view past the roundabout on Old Burleigh Road towards Q1 and Surfers Paradise and another urban view along Albert Avenue are spoilt by the resort walls and plantings, divorcing the buildings from the street (Figure 4.4.1j).



Figure 4.4.1j: View along Old Burleigh Road at the Intersection of Albert Avenue (BRINT2) (Author 2012)

People may want to relax in the open grassed areas of the park, but the lack of screening of the road means traffic noise will dominate the spaces around the location. There are distant spaces to relax or watch in the park at the BBQ and children's playground. The large open spaces at the location in the park could be territorialised by groups with their own facilities or for ball games, but you are more likely to go further into the park. Along with the nature of the road crossing from Albert Avenue, the location actively discriminates against elderly and mobility impaired people by only having grass to sit on, with no shelter.

4.4.2 Burleigh Heads

In considering the degree of fascination found in the beach precincts, it is clear that the direction people are facing determines the degree of fascination of the natural, transitional and built environments. The fascination tends to increase from the built to the natural, and decrease as people travel inland. This is also true in the Burleigh Heads beach precinct.

All the transitional locations of the Burleigh Heads beach precinct had some degree of visual, aural and sometimes olfactory connection to the beach and ocean. The restorative nature of the Burleigh Heads beach precinct as a whole reflects this sense of being in what Kaplan (1995) referred to as ‘a preferred natural environment’ (Figure 4.4.2a).



Figure 4.4.2a: *Idyllic, Pleasant, Attractive, and Prosaic Locations in Burleigh Heads (Author 2012)*

The degree of fascination found at each location is affected by its orientation as are the degree of temptation to linger and the likelihood of wanting to take in the views. The more directions from each location that invite these types of activity, the more fascinating a place is considered to be. Although potentially a place which could rate highly as a restorative place, the location at Burleigh Heads SLSC (BHSN) is not a comfortable one and does not qualify as idyllic, despite some excellent views from the traverse pathway.

Views are accessible mostly whilst walking along the traverse path and standing in the unshaded open space. There is one bench to sit on by the beach access, but the majority of seating in the locality is at the furthest edge of the open grassed space from the traverse path. Because the seats and spaces are not aligned very well to the views, these views can only be accessed whilst walking along the traverse path and standing in the unshaded open space (Figure 4.4.2b).



Figure 4.4.2b: The Poor Location of Seating at the Burleigh Heads Social Node (BHSN) (Author 2012)

The location and design of the SLSC building, with its bulk and blank walls blocking views along its edge with the transect path, contribute to this degradation of the potential of the restorative views of park and beach. The location of the social node at BHSN was not considered overall to be a place to pause or linger, although the closer you are to the beachfront along the traverse path, the more tempting it is to do so.

The situation is improved at the location of the Goodwin Terrace (BHBA1) beach access point. From under the shade trees, alongside the traverse path, the view is very pleasant up the beach to Surfers Paradise and along the path past the SLSC. There is also an attractive visual connection to the waves and beach activities from the traverse path. This visual connection is largely lost in the open grassed area and the unshaded seats under the Norfolk

Pines as you move inland. The closer to the beach fencing and beach access point, the more idyllic the sense of place is. However, this idyllic sense is quickly degraded moving inland and largely lost once the parking along Goodwin Terrace is reached and traffic dominance reasserts itself.

The inclination to linger at the Goodwin Terrace beach access point tends to be negatively affected by the narrowness of the available foreshore park space; a limited number of places to sit in the shade; the location of plantings and beach fence; the minimal supportive facilities, and a constant flow of people in front of, and traffic behind, people sitting at the location. However, many people are observed to pause to briefly take in the view (Figure 4.4.2c).



Figure 4.4.2c: The Promenading Space of Burleigh Heads Beach Access One (BHBA1) (Author 2012)

The most idyllic location in the beach precinct is found at the children's playground beach access point (BHBA2) which is a very good place for connecting to the restorative environment. There is a direct connection from the foreshore park to the beach and the views to the ocean, along the coast and inland across the park are pleasant to outstanding in nearly every direction. Standing in a park amongst trees with a range of fore, mid and distant views

gives people direct visual, physical and symbolic connection to restorative environments, uninterrupted by fences or plantings.

The spatial arrangement allows those with movement disability to be able to view the coast and beach from the path that is immediately adjacent to, and level with, the beach. The public facilities, however, do look heavily used and a little worn. Large flocks of rosellas roost in the Norfolk Pines at night, leaving a significant volume of droppings that appear to be regularly cleaned, but the odour and some staining still persists (Figure 4.4.2d).



Figure 4.4.2d: The Promenading Space of Burleigh Heads Beach Access Two (BHBA2) (Author 2012)

Traffic noise, odours and people moving are a dominant feature of the Memorial Park location (BHNT1). There are some pleasing views across the foreshore park to glimpses of the beach and ocean and within the Memorial Park, but there are also unpleasant views of blank walls along the slip road of the highway and across the highway itself (Figure 4.4.2e). The further away from the highway and the further into the Memorial Park, the more likely people are to stay and linger, especially to use the shaded beach and table seats for eating and drinking or the open grassed areas for picnicking.



Figure 4.4.2e: The Gold Coast Highway at Burleigh Heads Intersection One (BHINT1) (Author 2012)

Facing into the Memorial Parkland towards Connor Street, the reduction of traffic noise makes the parkland feel pleasant, although the presence of the highway often reasserts itself with surges of loud heavy vehicle traffic. Screening by higher plantings might decrease the intrusion of noise and odours, but it would also cut the visual connection to the ocean.

The domination of the highway continues at the The Esplanade location of BHINT2 although the approach to the highway is not as confrontational as found at Memorial Park (BHINT1). This is thought to be due to the different orientation of walking approach routes, the curve inland of the highway, the proximity of shops and parkland and the variety of distant views to natural and pleasant environments at the locality.

Connor Street has a relatively pleasant urban edge that supports visitation. There are people eating and drinking in the cafes and restaurants along this road. People also wait for the crossing lights and at the bus stop. However, it is still primarily a transitional place with the distant views of the beach and ocean inviting people to move on, away from the constant traffic (figure 4.4.2f).



Figure 4.4.2f: The Gold Coast Highway at Burleigh Heads Intersection Two (BHINT2) (Author 2012)

4.4.3 Mermaid Beach

The suburban nature of Mermaid Beach entirely dominates its degree of attractiveness and distinguishes between the visitor and the resident, especially the beachfront resident, in the experiences it offers to people. The precinct lacks the transition from urban to foreshore park, to beach and ocean, found in the other beach precincts of the study. A modified version of this relationship is found at the locations close to the foreshore pocket park, but not at the stub road beach access points.

The arrangement of residential homes and apartments along the beachfront creates a sharp contrast between the pleasant, pocket foreshore park and its surroundings. The lack of appeal in the surrounding suburb emphasises the level of attraction that can be found in the precinct where the beach can be accessed through the park. However, like many an oasis, the small foreshore park can only support limited visitation before it becomes crowded.

The overall level of attractiveness in the Mermaid Beach precinct is determined by asphalt, concrete, render, fences, power poles and grass as the dominant elements of the visual and material palette of the precinct. The streets behind the beachfront are regular with long

straight views to largely indeterminate distant destinations, and the streetscape makes the visitor feel unwelcome.

Visitors on foot in particular, are faced with poor pathways, long distances, very little shade or shelter and few places to rest (MBINT1I, MBSNU, and MBINT2D). This arrangement makes people very unlikely to explore beyond the foreshore park as they cannot be sure where the roads lead and if there are any destinations within walking distance (Figure 4.4.3a).



Figure 4.4.3a: Asphalt, Concrete, Render, Fences, Power Poles and Grass, Mermaid Beach (Author 2012)

The foreshore park is the way that visitors and residents without beachfront homes access the restorative benefits of the beach and ocean (MBBA1U). Tourists are unlikely to visit the beach precinct as it is hard to get to and not on the list of places to visit.

The foreshore pocket park itself is attractive enough, but it feels boxed in and artificial. This artificiality is emphasised by the fenced dunes, viewing platform and paths to the beach (MBBA2D). In contrast, the beachfront residents literally step into the restorative benefit of nature with a drink and a meal at hand from the comfort of their private back yards, sheltered behind their high blank walls to the street.

The location of the transition from the foreshore park to the beach at MBBA1 is the most significant public location for social interaction in the precinct. As in Burleigh Heads, it is clear that it is not the SLSC building that creates a social node, but the spaces, facilities and amenity found close to the beach access from the foreshore park. This precinct also emphasises the value of the foredune as the transitional space between urban and natural environments. In this precinct, the value of views from the foreshore is clearly affected by the location and design of the beachfront homes.

An artwork of a mermaid is an oblique reference to the history of the name of the suburb from the visit to a Gold Coast beach by John Oxley, Surveyor-General of New South Wales in 1823, on the cutter 'Mermaid' (Gold Coast City Council 2013b)(Figure 4.4.3b).



Figure 4.4.3b: The Mermaid Artwork in the Foreshore Park (MBBA1) (Author 2012)

From the location of foreshore pocket park beach access location (MBBA1) there are views along the coast and to the ocean, but activities on the beach are not visible due to the dune profile. The location is a place for a short stay, to take in the views from the viewing platform, access the beach, cook, eat, drink, sit, read a book and relax. It is a very quiet place, except for the sound of the ocean. There were times during the observations when nobody else was

visible. There are places to lie down, sit in or out of the sun. It is open to the prevailing wind and this may deter people staying.

The size of the park limits the opportunity for territorialisation and use for activities. It would feel crowded or full when the SLSC members are using it and there are no spill-over spaces beyond the boundaries of the park. Mermaid Park is available but it is not signed or visually or physically connected to the foreshore park. The support for extended stay is also limited by the opening hours of the cafe and the eligibility rules for entry to the SLSC.

The other beach access in the precinct is located at the end of Ventura Road (MBBA2). The viewing platform, car parking space and beach path is the only public space at the location. It is very quiet and peaceful with the ocean and wind as the dominant background sounds. The viewing platform is exposed to the prevailing wind and has no shelter or shade. The wind can be felt here even when it is not noticeable inland. It is a place where two environments are starkly adjacent - the dunes and ocean to the front and residential development at the back.

The beach access at the stub end of Ventura Road location is suitable for sitting, reading, viewing and relaxing, if the weather is suitable. It would be a good place for someone seeking solitude and views of the ocean. You could lie down on the benches of the viewing platform but there is not much room to share with others. There is very little to do except passive activity and if you wanted a walk you would have to go onto the beach, which discriminates against people with mobility problems.

The viewing platform is very small and enclosed, in contrast to the open views and dunes which invite use. The platform feels confined, controlled and exposed to the elements. The platform appears to have been designed so that people on the platform are viewable from the homes, but plantings and angles of view prevent the public viewing into the homes. The Pandanus trees in the dune, adjacent to the fence on the Surfers Paradise side of the beach entry, effectively screen the beachfront homes from the viewing platform (Figure 4.4.3c).

The other transitional locations in the precinct occur in an urban environment with the Montana Road (MBINT) and the Mermaid Beach SLSC (MBSN) locations having some distant visual connection to the natural environment through the car-park and foreshore park. The Ventura Road (MBINT2) location has no visual, physical or symbolic connection to the natural environment, so there is only public to private property transition at this location.

Montana (MBINT1) and Ventura Roads (MBINT2) are allocated to suburban residential use with limited public parking available between the driveways of homes. Hedges Avenue is effectively the ‘Oceanway’ for cyclists. Walkers are relegated to a subservient role.



Figure 4.4.3c: Homes are screened from the Viewing Platform (MBBA2) (Author 2012)

The only commercial to public space transitions in the precinct are to be found at the Caffè Republic (MBINT1) and the Mermaid Beach SLSC building (MBSN). All other private to public transitions in the precinct are marked by hard edged separation of high walls and driveways. The Caffè Republic has a small outdoor dining area with views to the park and ocean, but the SLSC utilises the first floor restaurant to connect with views to the beach.

There are no spaces or facilities along the roads for the public. The sense of being in an urban rather than a beach precinct increases the further people are from glimpses of the ocean through the foreshore park. By the time visitors travel to Ventura Road (MBINT2), past the Mermaid Beach SLSC (MBSN), there are no visual, physical or symbolic connections to the beach and ocean. Instead, people find themselves in a poorly designed and isolating streetscape of long views and strictly separated public and private space, with little or no value to the non-resident visitor on foot, except as a route to nowhere (Figure 4.4.3d).



Figure 4.4.3d: The Streetscape along Hedges Avenue near Ventura Road (MBINT2) (Author 2012)

4.5 Concluding the Urban Design Walk-through Analysis of the Beach Precincts

This chapter has conducted a walk-through urban design analysis of place using urban design principles and the requirements of a restorative environment. This analysis was conducted from the perspective of a walking visitor to the different beach precincts. The analysis has identified and categorised the existing physical and spatial relationships of the urban design of the precincts. It has also identified the implicit and explicit social, cultural and institutional permits and prohibitions for different groups for public access to activity and amenity in those beach precincts.

The analysis has also revealed those uses and activities that have been encouraged and discouraged in different locations in the public space network. These characteristics can be summarised specifically as relating to the urban design principle of governance and generally as the urban design solution chosen for the particular beach precinct:

- **Governance:** characteristics of the nature of the permissions to enter public space at the transitional locations of built to access forms, access form to the beach and from private (residential or commercial) to public property; the nature and location of plantings, fences and beach access paths; the nature of commercial edges to public space; the design of pathways and the public space corridors along them, for different modes of movement and activity; the design and location of roads and public transport routes; the nature and location of shade and shelter to support extended stays; the nature and location of signage of the amenities, facilities, activities, events and support services available within walking distance; the nature and location of facilities to support activities and report problems to authorities; maintenance and cleaning of the public space network.
- **Urban Design Solution:** characteristics of the spaces, routes, facilities and buildings along the edges and within the public space network; proximity of destinations and the network of connections between activities and uses; the arrangement and location of edges, spaces, facilities and routes to the views available from the built through the access to the natural forms; the transitional edges of built to access to beach; the distances between the transitional edges; the sizes and combinations of open spaces and enclosures; the use of landforms like dune crests, beachfronts, headlands and built landmarks.

The existing governance and urban design solutions of the beach precincts are articulated and demonstrated in and around the transitional locations and in the allocation of public and private spaces for different activities and uses. Different characteristics of the design of the beach precincts reflect the relative values of all the designers, builders, landowners, clients, politicians, planners and project groups who have been involved.

Different design solutions for the different types of activities empirically observed have been associated with different locations within the precinct. These design solutions have produced supportive environments for different activities and behaviours in different locations within the precincts, and restricted or prevented others from manifesting.

It is at the edges and within the corridors between built, access and natural forms that the usefulness of the beach precinct is largely constructed. Without egalitarian public access these edges and transitions create exclusive or selective conditions of use for the public spaces that do exist. The evidence for the influence of particular dominant and project groups

in the professions and institutions that have created and controlled the urban development of the beach precincts can be observed in the existing physical artefacts of the beach precincts.

Those who have been advantaged, or evident, as dominant in the urban design and planning of existing beach precincts include beachfront and suburban residents and their political representatives, the SLS associations and clubs, cyclists under the active transport and tourism agenda, road transport engineers, environmental groups and other lobbies including real estate, construction and tourism within the different levels of government and those industries.

In creating the current urban design solution for the different types of beach precinct found on the Gold Coast, the amalgam of past and contemporary decisions has determined who and how different people can access the social, recreational and restorational benefits only found in beach precincts.

As urban design solutions, each beach precinct is distinct from the other. Many of the photographs, taken from each of the four directions from the observation points in the following sections, illustrate the importance of a good design solution in creating an impression on the walking visitor. The mix of often uninteresting and unimaginative views, especially along the roads and from the beach front inland, have an effect on the overall attractiveness of the precinct.

Burleigh Heads has the least number of unattractive views in the different directions from the observation locations. There is nearly constant visual connection in the precinct with the beach and ocean, often within framed views. Broadbeach, except from the boardwalk, is disconnected from many places in the precinct by the mass of the Kurrawa SLSC building and the foreshore dunal plantings. Its level of attractiveness does not compare favourably with Burleigh Heads. Mermaid Beach is the least connected to beach and ocean views and is the most unattractive precinct of the case study for the walking visitor.

This pattern of visual connections to facilities, activities and the amenity of views can also be seen to be related to the analysis of physical form of urban environments and leisure activities conducted by Gospodini (2001). The spatial pattern of urban design created by destinations along shared paths or cycleways, as found in Broadbeach, has high syntactic depth and low diversity of activity choice. However, around the main children's playground area of Burleigh Heads there is a shallow spatial system with diverse destinations for activities that

extends from the park to the beach that Gospodini (2001) argues creates a ‘lively atmosphere that is appreciated by tourists.’

The decisions and solutions adopted in the cultural political process of governance, the selection of urban design solutions and the degree of public access and supportive facilities for the different beach precincts are highly interdependent, historically contextual and changing at different rates in different places within the different beach precincts.

For example, individual plots may be redeveloped under different planning regimes, businesses may change hands and new cultural influences will make new demands on public spaces and facilities. However, it is beyond the scope of this thesis to detail every influence and decision made in the governance of urban design solutions in every part of the different beach precincts, but the key visible relationships of place, space, activity and behaviour can be observed and considered.

In the initial design of the research the typology of urban beach precincts was used to determine the location of the observation points in key places in the transitions from built-to-access-to-natural forms. The social node was designated as the location of the SLSC building in each beach precinct (Section 2.2.1).

The assumption made in the initial research design was that the SLSC building would provide a location that would support the most social activity in the beach precinct. During this research it has emerged that, although the SLSC building may be a visually dominant landmark in the foreshore park which affects the location of routes, spaces and facilities in the precinct, it is not necessarily the place in the precinct that is the most socially active. This is illustrated by examining and comparing the design of the SLSC buildings in the access form in Broadbeach and Burleigh Heads and in the built form in Mermaid Beach.

The location of the observation point in Broadbeach (BRSN) was between the Kurrawa SLSC building and the Robert Gatenby Boardwalk. This transitional location is socially activated by meeting the needs and preferences of visitors to the beach precinct for public access to beach activities and views along the coast and to the ocean. It is the only public place in the precinct place with clear ocean views, due to its location on the crest of the foredune. Other locations in the precinct do not have this clear visual and physical connection between the access form of the foreshore park and natural forms of the beach and ocean as they are cut off by dunal profile, plantings and fences.

The ground floor design of the edge of the SLSC buildings is an example of the ongoing processes of development and redevelopment in the critical transitional locations of the different beach precincts. It shows the influence of motivations other than good governance or urban design and planning in the production of places in those transitional locations that produce value for the visiting public.

Burleigh Heads SLSC building has been subject to redevelopment during the course of the research, whereas Kurrawa and Mermaid Beach SLSC buildings have remained essentially the same. Kurrawa SLSC may however be responding to perceived deficiencies in its location and building design, judging by recent planning proposals to either redevelop (Ardern 2011a) or relocate the club building (Bedo 2012).

The nature of the design solution of the Broadbeach and Mermaid Beach surf lifesaving clubs at their interface to the public space network affects their value as potential social nodes. Burleigh Heads club has a ground floor commercial public frontage to the beach where people who are not members can purchase meals and drinks and sit opposite the beach (Figure 4.5a). Mermaid Beach SLSC has an imposing entry from the street and there are signs indicating the facilities and amenities available, but the entry is confusing with the closed ground floor doors and the reception desk up the stairs on the first floor (Figure 4.5b).



Figure 4.5a: Burleigh Heads SLSC Public Cafe Frontage to Path and Beach (BHSN) (Author 2012)



Figure 4.5b: Mermaid Beach SLSC Club Frontage to Hedges Avenue (MBSN) (Author 2012)

Kurrawa Surf Life Saving Club does not have a public entry point on the beachside of the building with club lifesaving facilities on the ground floor and meals and drinks on the first floor (Figure 4.5c). Both Mermaid and Kurrawa have no ground level public facilities or access to food or drink without club membership or registration of visitors who have to go to the club's first floor to access these facilities which can support extended stays. Because of this, the Mermaid and Kurrawa SLSC have a club presence, rather than a public presence, in the beach precinct that may deter the public from entry and use.

The nature of the governance and design solutions for supportive public environments can be implied from the activities observed at these locations, especially from activity and amenity in the transitional locations of social node, beach access and intersection of transect paths to the access and built forms.



Figure 4.5c: Kurrawa SLSC Club Frontage to Path and Beach (BHSN) (Author 2012)

In combination, these observations build a picture of the most and least useful places in the different beach precincts that support diversity of activity and behaviour, and the associated

urban design characteristics that accompany these activities and behaviours. The design, location and space allocation of the beach precincts studied are characterised by:

- The location and the design of children's playgrounds, facilities such as toilets, BBQs and sheltered seating to off-path locations has disconnected people from the transitional restorative locations and reduced the proximity and connectivity of different facilities within the public space network (section 4.2).
- The design, location and space allocation of car parking that edges the foreshore parks in all three beach precincts disrupts desire line routes from the built to access forms, and uses public space that could be devoted to other activities (section 4.2.3).
- The design, location and space allocation of the roads in the built form transition to the access form, promotes vehicle preference over other users and limits pedestrian preference crossing points in Broadbeach and Burleigh Heads (section 4.2.2 and 4.2.3)
- Of the three beach precincts studied, the only beachfront which provides uninterrupted visual, physical and symbolic connection between the traverse path and the beach and ocean is a short stretch between the Burleigh Heads SLSC (BHSN) and the beach access at the intersection of the traverse and transect path, near the children's playground (BHBA2). The rest of the beachfronts appear to have been designed to control and manage beach access and act as environmental erosion control measures, as evidenced by the fenced dunes in Broadbeach and Mermaid Beach.
- The lack of signage or information on events directed at people visiting all three of beach precincts on foot is a significant barrier to public access for the visitor, especially someone with no local knowledge such as overseas or interstate tourists. This lack of outsider access is further compromised by the lack of visible feedback systems, passive and active surveillance in many parts of the precinct that create potentially unsafe conditions for visitors (section 4.3.1).
- The use of fences, dunal ridge line and plantings separates people in the foreshore park from a connection of views to the beach and ocean in Broadbeach whilst creating private views from resort towers in the built form across the foreshore park (section 4.3.2).
- The design, location and space allocation of private property in the Mermaid Beach precinct along with privatisation of publically maintained spaces, such as dunes, favours beachfront property owners who have fences erected and maintained by public funding, but have privatised access to the foreshore dune and the benefits of

views. This simultaneously maintains privacy for beachfront residents while restricting the location, size and design of viewing platforms for visitors to enjoy the location's benefits (section 4.3.3).

- The design of the surrounding streets, location of parking, roads and obscured routes, along with a lack of signage and the positioning of Mermaid Park behind the streets, has created a facility that favours local residents and the SLSC members.
- The nature of the design of the transition from built form to foreshore park in Broadbeach and Burleigh Heads across busy roads: in Broadbeach the urban side of Old Burleigh Road has been allocated to resort towers with no street level facilities to support extended public stay such as cafes, shops, toilets and restaurants. The high walls, plantings and facilities also screen the resorts from the road and foreshore park thereby reducing passive surveillance. On the foreshore park side, the road is lined with parking. In Burleigh, the commercial edge of the principal built form supports extended stays, although crossing the road is still difficult for young, old or mobility impaired people (sections 4.3.1, 4.3.2).
- The design of footpaths, in Mermaid Beach in particular, are very poor with changes of surfaces, narrow and broken pavements, trip hazards, power and lighting poles in the pathway, dead ends and unsuitable crossing points (Section 4.2.6).
- Generally, the public spaces are well maintained and cleaned. However, some of the plant species used, such as the Norfolk Pine and Casuarina, produce little shade and create pine needles and small nuts that make the grass beneath them less useful for sitting, playing, resting and picnicking on.
- There is a shortage of lighting, shade, shelter and places to rest along pathways and roads in all the beach precincts of the study to support walking, especially for older or mobility-impaired people. In Broadbeach, this situation may be due to the perceived need to keep the public spaces of the foreshore park free of obstructions for the events, carnivals, festivals and markets that are held there.

This chapter has gathered evidence that informs the research question of 'What are the urban design attributes and characteristics of selected Gold Coast beach precincts?' (Section 1.7) and the research propositions (section 1.8.3):

- The chosen design solution of the built and natural environment in the particular case of a beach precinct is predictive of visitors and residents of that beach precinct.

- The design characteristics of the specific beach precinct will be related to the nature of the responsive relationship of the built environment to the natural environment, and valued features of beachfront, such as views and the opportunity to relax and restore.

The evidence from this analysis has begun to address the subsidiary research question: ‘How well does the urban design of the public realm of different types of beach precinct meet the preferences and values of the different user groups of those precincts?’

The evidence in this chapter shows that there are constituencies of advantage and disadvantage amongst the different user groups. Tourists and residents of the beach suburbs, especially beachfront residents appear to be advantaged, whereas day visitors from inland suburbs of the Gold Coast, South East Queensland and Northern New South Wales appear to be disadvantaged by the urban design and planning of the existing beach precincts.

Those groups most advantaged by the current urban design of the Gold Coast Beach precincts studied are SLS clubs and members, beachfront residents, beach suburb residents, tourism operators and property owners, cyclists, drivers, the physically fit and mobile - largely young or adult males. Those groups who can be seen to be disadvantaged are the elderly, young children and carers with children, the partially sighted, deaf and mobility-impaired and women in particular.

The most important spaces for the creation of advantage or disadvantage for access to use and activity for the different groups who visit the beach precincts were found in the **transitional corridors, locations and edges** in a beach precinct. The key transitions occur along the walking corridors that traverse and transect the elements of the beach precinct typology:

- **Transitional locations** are found at social nodes, beach access points and gateways where facilities provide access to specific activities and amenities;
- **Beachfront transitional corridor** found between the access form and the beach in places with public foreshore spaces;
- **Gateway transitional corridor** found between the built and access form, and
- **Transitional edge** - the interface between public and private/commercial property and the different forms of the typology

We now move on to the next two chapters which examine the relationships of people and the purposive use of place (Tuan 1974, Rapoport 1982, Canter 1983 and Relph 2006).

Chapter Five Use of Beach Precincts by Individuals and Groups

The identity of a place is comprised of three interrelated components each irreducible to the other – physical features or appearance, observable activities and functions, and meanings or symbols. Edward Relph (2006)

This chapter examines the patterns of activity of the demographic and social groups associated with the transitional locations in the beach precincts, to determine the relationships of activity associated with facilities and amenities by observation. In the last section, the chapter will also inquire into the preferences people express for beach development, visitation, use and activity. These observations and inquiry are intended to address the relationship between people and place in beach precincts posed by the initial research question and its subsidiary questions (Section 1.7).

As Relph (2006) observes, the activities, uses, activities and cultural meanings that people associate with the physical attributes and characteristics of place, are interrelated and irreducible. This way of understanding environments and their uses and activities is central to the way that research has been conducted in fields that draw on experimental and simulated research of perception of place (Castello 2010) and people's behaviour in built and natural environments (Steg, Van den Berg, Agnes E. and De Groot 2013).

The field of environmental psychology is defined by Bell *et al.* (1990: 6) as 'the study of the interrelationship between behaviour and experience and the built and natural environment'. The field is characterised by an emphasis on studying environment and behaviour as a holistic whole (Bell *et al.* 1990).

The relationship between the individual and the environment is considered to be dependent on the patterns and complexity of the landscape, the experiences with, and in, that landscape, the individual's personality and human sensory interaction with that urban or natural landscape. This creates an interactive behavioural experience that can be described and correlated with the behaviour and experiences of other people and places (Bell *et al.* 1990).

Research in the field has relied on experiment, simulation, correlation and description using questionnaires, laboratory experiments and computer simulations to understand what people think, say and how they act. Field studies and case studies are also used to examine how people act and think in particular settings to uncover contemporary phenomena and the context in which they occur (Steg, Van den Berg, Agnes E. and De Groot 2013).

Researchers collecting primary observational data in the field have considered what it is that constitutes data (Gray 2009) and have identified the features of the data as illustrated in table 5.0. Each of the data features described is capable of being studied in isolation, correlation, contrast or comparison and holistically to help describe the patterns and relationships between them to propose how places are used purposefully by people (Canter 1983).

Table 5.0: The Data Features and Research Focus of the Purposive Use of Place (Adapted from Gray 2009)

Data Features	Features of the Beach Precincts	Research Focus
Space	The three beach precincts	The governance and urban design of the different beach precincts in relationship to the restorative benefits and purposive use of a particular type of place
Objects	The identified elements of the urban beach typologies	The transitional locations and spaces, the movement corridors and public infrastructure that supports purposive use
Acts	The actions and identity of individuals and groups	Chapter Five: The observed activities in the selected transitional locations and what they reveal about the actual patterns of use in the beach precincts in particular locations. Inquiry into the purpose of visit and preferences for activity, social use, amenity and opinions on the development of place.
Activities	The activities of people in the case study areas	
Events	Events as they occur, such as the SLSA Championships	
Feelings	Expressed emotions or beliefs in particular contexts	
Goals	The observable activities people are attempting to create in the beach precincts	Chapter Six: Textual analysis of themes of conflict at the transitional location of the foreshore-to-beach-ocean. Inquiry into the opinions and preferences of built environment and purposive use professionals.
Actors	The people involved during the research, their names and identities	
Time	The period of the research project observations and inquiries	The selected periods of field observations, textual sources, public and professional inquiry,

In the design of the observations and the inquiry into purposive use of place, limitations had to be set on the practical extent and limits to the collection of data that contained a balance between features of place and associations of those places with observable, reportable or

deductable relationships. The data features of space and objects have already been reported in Chapters two to four as explained in the research strategy adopted for the thesis (section 1.8) and the structure of the thesis (section 1.9).

In conducting the observations of activities and social behaviours within the context of the public space network of the selected beach precincts, the aim is to build a holistic overview of behaviour associated with particular places in the precincts, as is characteristic of qualitative research (Canter 1983).

Descriptive research simply reports events in a particular context. Accurate representations of reality need to be valid and reliable. The descriptive method does not seek to correlate naturally-occurring variables of the relationship between behaviour and place. Instead, it seeks to describe the characteristics of the phenomena of behaviour associated with particular physical settings for patterns of place utilisation (Miles and Huberman 1994).

The research paradigm used in this thesis is a mixed paradigm of the positivist, interpretivist and critical research traditions. In short, it assumes that reality is observable, reproducible and potentially replicable; that social and cultural phenomena emerge from the way the people involved construct meanings to support behaviours and that social and cultural structures shape and hold power over the permitted behaviours of individuals (Proshansky 1972).

The methodology employed in the field observations will be as an overt researcher who is non-participant (Lapan, Quartaroli and Reimer 2011). The observation points will be at the same transitional locations used in the typological and walk-through urban design analysis. This is intended to assist in the collection of qualitative data that builds a holistic picture of the relationship between activity, social behaviour and place at the same type of place in the different beach precincts.

5.1 Observing the Purposive Use of the Selected Beach Precincts

The design of the field observations was based on the range of sources that informed the design of the typological and walk-through urban design analyses (Appendix A). These analyses indicated the patterns of spatial relationships of location, movement corridors, and open spaces with activities which could be expected at the observation locations, within spectator distance, would fall in three broad classes of activity based on:

- Different forms of movement, usually along shared paths. These include walking, jogging, pushing a pram, walking a dog, cycling, skateboarding, wheelchair or mobility aide use, and driving.
- Different forms of activity in public space either off-path, in or on public facilities or in open-spaces. These include standing, sitting, viewing, watching others, smoking, working, taking photos, using mobile devices, using facilities such as showers. Other activities in public space such as reading, eating, drinking, talking, playing, lying down, staying in place, using Barbeques, waiting or meeting, shopping and selling. Reading and lying down in particular are relatively rare behaviours but they are often found together in the same locality.
- Different beach-specific activities that can usually only occur on beaches or in the ocean. These include swimming, paddling, surf-kite or body boarding, being in the water, fishing, boating, jet-skiing, sunbathing, digging in the sand and SLSC activity.

During the field observations data was collected to identify how people moved through the precincts. No motor vehicle movements were recorded and, although it is expected that vehicle movement did affect the experience of each user of the precincts, it was not practical for the researcher to observe traffic at the same time as recording movement modes and directions, as well as the social structure of the visitors and their other activities.

The primary objectives of the observations were to identify the relationships and patterns of movement and activity in the different types of location in the beach precinct. Other objectives were concerned with building an understanding of how the design of the public spaces of the beach precinct supported and facilitated movement and activity by the identified users of the precinct. This included trying to identify the social groups that were using the precinct, the social structures of the users, and their approximate age.

The information collected in relation to social groups using the beach precinct was adapted by the researcher from the broad age groups identified in the healthy and active living physical activity guidelines (Department of Health and Ageing 2010) and the groups used by the Australian Bureau of Statistics (Australian Bureau of Statistics 2010a). Data about the users of the precinct was collected to determine patterns of use by age and gender and social grouping. The collection of this data intended to compare patterns of use of the different beach precincts by different user groups.

The field observations (Appendix B) broadly recorded the age and gender of the people found in the location of the observation point, whether they were there in a social group or on their own, what they were doing and where they were doing it. The observations also collected information on where people were going and how they were getting there.

The observations were designed to collect simple, raw data to be analysed using Nvivo 9™ software to reveal the relationships and patterns of movement and activity associated with the transitional locations of the beach precincts. The coding of observations was also designed to analyse the social structure of the visitors to the precincts using the following data attributes:

Age and Gender: Classified to Male, Female, Child (0-14), Young Adult (15-24), Adult (25-54) and Older Adult (over 55).

Location: Classified as Broadbeach (BR), Burleigh Heads (BH) or Mermaid Beach (MB); and observation point: beach access (BA1, or BA2), or change of form (INT1, or INT2), and social node (SN) of each beach precinct.

Individual, Couple or Group: The field notes also allowed for coding to individual classification as well as by groups and the size of group, and as being either generational or intergenerational groupings.

An example of the way the data was notated for movement and social structure at the Burleigh Heads beach access (BHBA2) is shown in table 5.1. The data was recorded with either numbers, to identify groups of the same age and gender, or brackets, to identify mixed age or gender groups. This raw data records movement past the observation point in the direction of the surf club by walking, jogging, cycling, skating, pushing a pram and using a mobility buggy. It tells us, for example, that two individual adult males and an older male cycled past the researcher in the 15 minute period of observation.

Table 5.1: Example of the Raw Data Collected for Movement Observations (Author 2012)

Direction	Walker	Jogger	Cyclist	Skateboard	Pram	Other
To Surf Club 15mins of observation	(C AF), 2AF, (C AF), AM, AM, (OM OF), OM, AF, (OM OF), OM, (AM AF), AM, (AM AF), AM.	AM, AM.	AM, AM, OM.	YM	(C OF) (C 2AF)	OM in Mobility Buggy

The observed data collected in the different beach precincts was then coded and analysed using NVivo™ software. This software is oriented to qualitative research and has features

that allow the researcher to work either for either deep analysis of rich text-based sources or for organising and intensifying the usefulness of data, such as the field observations collected in this research (Bazeley and Richards 2000).

5.1.1 Procedures adopted in the Field Observations

The procedure at each observation point was to select a place at the five transitional locations in each of the beach precincts where movement and activity could be observed with, where possible, some shade for the observer. These observation points were conducted at the same locations as the typological and walk-through urban design analyses (section 2.4).

The field observations were conducted in the chosen beach precincts at the selected locations over a period of five weeks in February and March of 2012, during the late summer. The weather during this period of observation was settled and neither too warm nor cold, allowing people to enjoy all the beach has to offer without the extremes of temperature or humidity that can sometimes occur on the Gold Coast (Bureau of Meteorology 2013b).

Approximately 680 minutes of structured observations of movement and activity were conducted in total. The Burleigh Heads structured observations occupied 220 minutes, Mermaid Beach 210 minutes and Broadbeach 250 minutes. The location of amenities and facilities was also surveyed and recorded during the same months as the structured observations.

The observations were conducted during daylight hours on different days of the week and during generally pleasant weather conditions. The selected period and times the observations were conducted does imply that the observations can only be considered to be representative of beach movement and activity during these periods. The method of sequential collection of data collected for each observation point means it is difficult to compare data between the different locations and beach precincts as the collection of data was not simultaneous.

In selecting the observation point, a degree of shade was sought, as solar ultra violet levels in the open at any time of year in the Gold Coast are in the range of high to extreme (Bureau of Meteorology 2013a). A display board was also set up to invite passers-by to complete the questionnaire (Figure 5.1.1). Where it was possible, the beach access observation points were selected to allow movement and activity on the beach to be observed.



Figure 5.1.1: The Observation Point Display Board Broadbeach Social Node (BRSN) (Author 2012)

Care was taken in locating the observation point so that individuals were not made to feel that they were being directly or continuously observed. Particular care was taken that families did not feel their children were being directly observed. This was done by different overt messages used during the observations. These included the positioning of the display board in full view and the use of the trees or vegetation to partly occlude the observation point from particular directions.

The display board also served the purpose of advising passers-by of the research purpose. Some people stopped to read the display board and passed on, and some asked for more information on the research, and were then invited to complete the questionnaire. Other people identified themselves as tourists or visitors, and used the researcher as a source of information on local or Gold Coast destinations, public transport options or other places of interest.

Taking direct, head-on photographs of individuals was avoided where possible and the researcher deliberately framed the shot with people walking away rather than towards the researcher. If requested the researcher gave information on the purpose and nature of the research and carried a copy of the ethics statement, identification and a business card for anyone who approached and requested further information or identification.

The area of observations were conducted at theatrical and spectator distances (Section 4.0.2) depending on the local environment. This distance was checked onsite by using maps with view distances marked on them. Buildings, trees, plantings, fences, amenities and sometimes vehicles obscured views in some places.

The distance at which observations can be considered reasonably accurate is dependent on the researcher's sight and to a lesser extent, hearing. To identify gender and age the person had to be close enough to distinguish features, usually at a distance less than the identified theatrical distance of 35metres. Activities and artefacts can usually be perceived at a greater distance of up to the spectator distance of 70 metres, but the further away someone is, the less accurate the observation of that activity or artefact (Gehl 2010).

Activities were observed by dividing the space around the observation point into quadrants. When people were not passing by on the pathways, the activities observed in the public spaces and facilities in each quadrant were recorded. This observation method was modified from the 'System for Observing Play and Leisure Activity in Youth' (SOPLAY) which is intended to collect observational data on the physical activity of students in outdoor areas when the number of participants and activity levels is constantly changing (McKenzie 2002).

From most of the beach access observation points, people on the beach were usually either wholly or partly obstructed by fences, vegetation or the slope of the beach. People were also often too far away to determine age, gender or exactly what they were doing. In recording observations of people on the beach, the total numbers engaged in movement and activity were summarised. This would be done without attempting to assign age groups other than children and adult.

It was recognised during the data collection that ascribing ages and genders can be a difficult judgement that could lead to the collection of erroneous or misleading data. The main problem encountered was in ascribing people to age groups and identifying boundaries between the age groups during the observations. The perceived boundary between children

and young adults, young adults and adults, and adults and older adults can be difficult to identify using non-participant observations. For example, at around thirteen to fifteen, chronologically older children can be mistaken as young adults and chronologically young adults can be mistaken as older children.

The difficulty in determining the boundaries between the different age categories was consistent to all the age category boundaries. Determining age was sometimes made more difficult by the fixed position of the observation point and distance to the subject, as beyond about 25 metres, or in bright sun, it could be difficult to ascribe age and sometimes gender. Children could also be difficult to ascribe gender to, particularly young children and children travelling in prams or being carried in slings. Initially children were recorded as either as female or male but this was simplified in the early observations to recording them without gender designation as children.

5.2 Analysis of Movement, Age and Gender in the Beach Precincts

The movement and activity observations were coded and analysed using Nvivo 9™ software. This allowed the raw data to be compiled to determine and identify any patterns of use by age and gender and to identify the presence of different social groups in the beach precinct.

Once coded, the observations revealed some patterns of use by age, gender and the social grouping associated with the different types of location in each beach precinct. The coding of the observations shown in table 5.2a indicates the frequency of activity at the different locations within the beach precincts, and the age, gender and social grouping patterns for all the beach precincts. The data within each coding node can be examined if necessary to elaborate the individual content of each node.

The busiest locations in each beach precinct appear to be at destinations for different but supportive purposes of visitation along routes that connect activities and functions; for example, Burleigh Heads beach access point 2 (BHBA2) and the bus stop shops, cafes, restaurants and hotel found near the location of the intersection of the Gold Coast Highway, Connor Street and The Esplanade (BHINT2).

Table 5.2a: The Nvivo 9 TM Movement Analysis Node Structure (Author 2012)

Nodes	
Name	References
Age and Gender	800
Adult	573
Child	119
Female	612
Male	626
Older Adult	246
Younger Adult	341
Broadbeach	274
BRBA1	68
BRBA2	39
BRINT1	57
BRINT2	35
BRSN	83
Burleigh Heads	429
BHBA1	52
BHBA2	200
BHINT1	79
BHINT2	109
BHSN	45
Individuals or Group	798
Couple	383
Generational Group	340
Individual	598
Intergenerational Group	153
Three or more people	117
Mermaid Beach	98
MBBA1	44
MBBA2	7
MBINT1	25
MBINT2	6
MBSN	17

The most visited precinct during the period of observation was Burleigh Heads (55%) followed by Broadbeach (37%) and Mermaid Beach (8%) (Figure 5.2a)

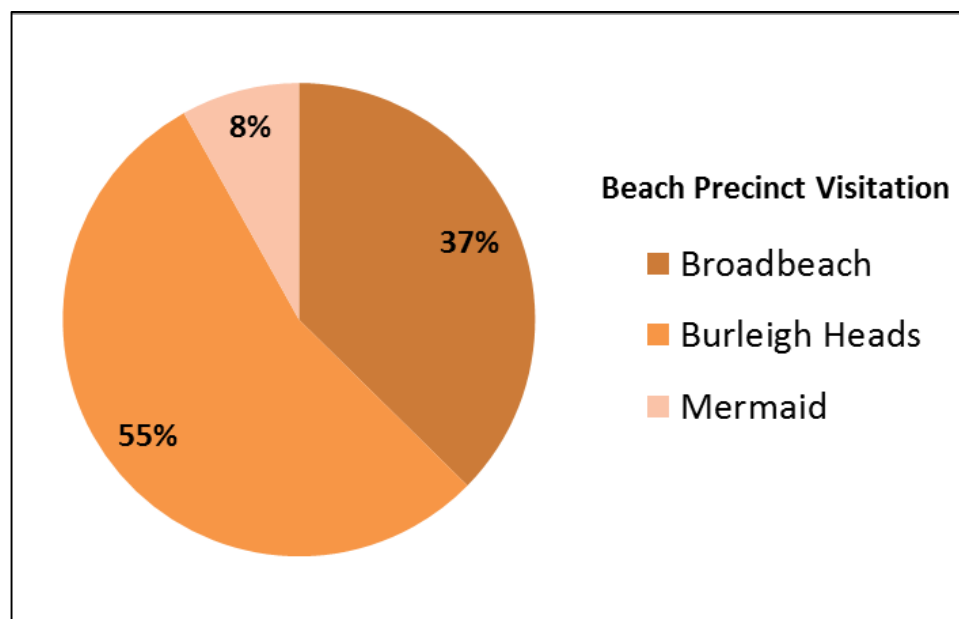


Figure 5.2a: Comparative Visitation to the Different Beach Precincts (Author 2012)

During the period of observation, Burleigh Heads not only had the largest number of people passing through or accessing the precinct, it also recorded the most diversity of users with joggers, pram and dog walkers as significant groups. This situation may reflect the narrative of Burleigh as a popular local and family destination (Experience OZ 2013; tripadvisor 2013). If Burleigh users are coming from more local sources, this pattern would also be understandable, as dog owners could be expected to be less likely to bring pets to holiday apartments that may ban or have limited facilities for them, as found in Broadbeach.

Table 5.2b: The Observed Incidence of Different Movement Modes in the Beach Precincts (Author 2012)

Movement Mode	Burleigh Heads	Mermaid Beach	Broadbeach
Observation Duration	220 minutes	210 minutes	250 minutes
Walking	1066 (291)	139 (38)	758 (182)
Cycling	129 (35)	38 (11)	112 (27)
Jogging	24 (7)	4 (>1)	35 (8)
Pushing a Pram	166 (45)	3 (<1)	50 (12)
Walking a Dog	43 (12)	4 (>1)	17 (4)
Skateboarding	22 (6)	1 (<1)	5 (>1)
Assisted Mobility	6 (2)	0 (0)	14 (3)
Total Incidence	1456 (397)	164 (47)	991 (238)
<i>Hourly rate in brackets</i>			

The variations may also be explained by Broadbeach having more temporary holiday let apartment residents than Burleigh and a smaller residential hinterland in relatively easy walking distance (section 2.4.1/2). The observed differences could also be caused by variation in the day of use patterns for each precinct that could not be observed by a single researcher.

Mermaid Beach has a significantly lower pattern of overall use and diversity of users than the other two precincts, including dog walkers. This is interesting as it is also the precinct with the highest percentage, and absolute number, of local permanent residents (Willoughby 2012a). It can be proposed that the nature of the street environment and foreshore spatial

design in Mermaid Beach deters use by families who are not locals and precludes activities other than beach or park-based activities.

The popularity of Burleigh Heads as indicated by these observations is noteworthy as it has less actual open space in the foreshore park than Broadbeach. It is possible that the type of temporary resident that stays at Broadbeach has a different pattern and focus of holiday activities and uses the local beach less than the users of Burleigh Heads.

5.2.1 Comparing Movement in the Different Beach Precincts

When comparing the movement patterns in the beach precincts they give some indication of how the different urban design solutions for each precinct have affected use. In the beach precincts as a whole it is noticeable that the percentage of people found walking in each precinct is consistently around 75 per cent of all movements observed. This rises to 86 per cent when walking a dog and pushing a pram are included as walking activities. This is significant as it illustrates the importance of beach precincts for walking (Figure 5.2.1).

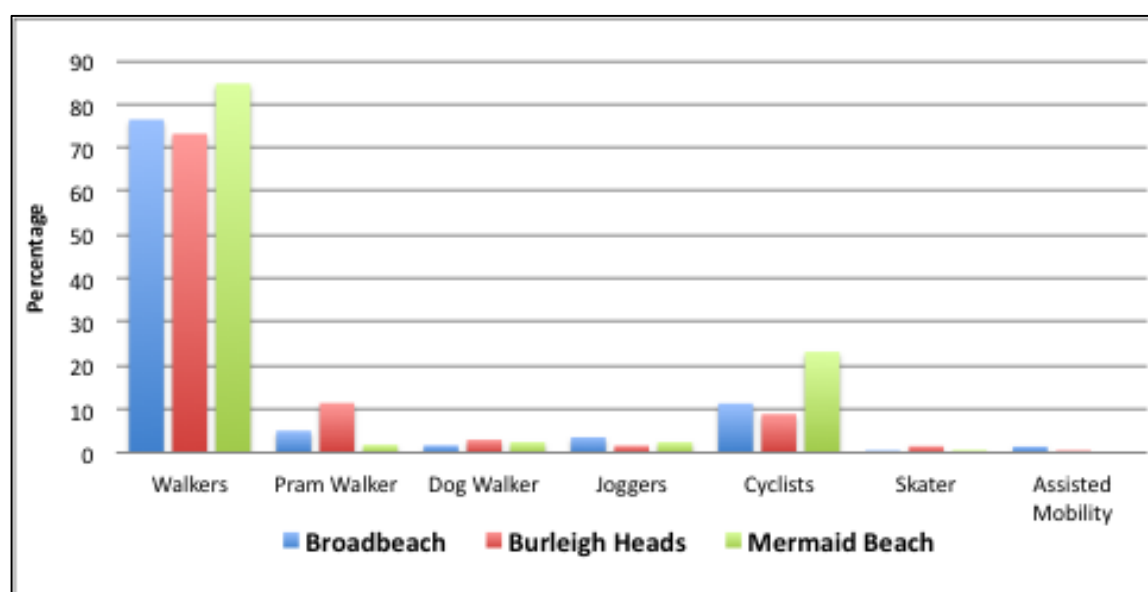


Figure 5.2.1: The Movement Mode Percentages in the Beach Precincts (Author 2012)

The most variation between the precincts can be found in the relative incidence of cycling. The cycling mode share in Broadbeach is 11 per cent which is around the same as Burleigh Heads' mode share with 9 per cent; but in Mermaid Beach it is 20 per cent. These differences probably relate to differences in the design solutions for the Oceanway in the different beach precincts, especially along the beachfront transitional corridor of foreshore park precincts.

The route of the Mermaid Beach section of the Oceanway is not through a foreshore park but along Hedges Avenue. Although there is very little visual amenity or pleasure in cycling along Hedges Avenue, it is still used as a transport route (Section 4.2.5).

In contrast, the foreshore park of the Broadbeach precinct can be used by local residents for cycling for transport, pleasure or exercise and its design actively encourages cycling (Section 4.2.2). The use of the foreshore park for exercise by residents and tourists may also explain why jogging in Broadbeach (4 per cent) appears to be a more significant activity than in Burleigh Heads or Mermaid Beach (each 2 per cent).

In Burleigh Heads, the Oceanway in the foreshore park is not used as much by cyclists as the roads along the park. It is thought that the level of social activity and the design of foreshore park are more suited to a wider range of activities than cycling (Section 4.2.3). There were more people walking dogs than there were observed in the other precincts. People were also observed using walking frames and assisted mobility vehicles along the beachfront pathway, a noteworthy indicator of the accessibility of the Burleigh Heads beach precinct.

Pram walking in Burleigh Heads (11 per cent) appears to be a more significant movement activity than in Broadbeach (5 per cent) and Mermaid Beach (2 per cent). There may be an accessibility problem in the Broadbeach beach precinct for some user groups, which may explain the difference. This may be caused by a range of reasons: difficulty in parking, a public transport stop that is over 800 metres away, or lack of motivation to use this particular beach precinct with some groups in society.

It is thought that the lack of view to the ocean in Broadbeach from the traverse path, which is restricted by dense dunal plantings, may be a disincentive to some groups, such as carers with a group of small children, as they cannot be in the foreshore park whilst observing their children playing on the beach, as is the situation on the Burleigh Heads beachfront.

People with children and prams may also be deterred from visiting Broadbeach by the width of the soft sand beach and the sand cliffs close to the ocean. It can be difficult for a parent with a pram and small children to walk across the beach to the ocean from the foreshore park. The reduced mode share of pushing a pram and jogging in the Mermaid Beach precinct are probably associated with the spatial layout of public and private spaces, unpleasant route choices along Hedges Avenue and general lack of accessibility for people who are not resident in the beach suburb (Section 4.3.3).

5.2.2 Movement Patterns in the Broadbeach Beach Precinct

The data for movement patterns was mapped using Adobe Illustrator™ onto plan views of each beach precinct and represented using movement arrows to indicate volume and direction of the observed movement. A scale was adopted that was uniform across the three beach precincts observed. All walking activities such as pushing a pram or walking a dog, as well as jogging, were merged and represented as green directional arrows. Cyclist movement was overlaid on the pedestrian movement where it was observed, as a light blue arrow. Caution should be exercised in comparing the movement activity between individual observation point locations, however, as the data was not collected simultaneously.

It can be seen from figure 5.2.2 that the dominant movement patterns of the Broadbeach precinct are from the shopping mall at BRINT1 to and from the beach viewing platform at BRSN and along the traverse path at BHBA2. Most of the observed movements were along the paved paths of the precinct, with some irregular movements into and out of the park area and to the car park and the Surf Life Saving Club.

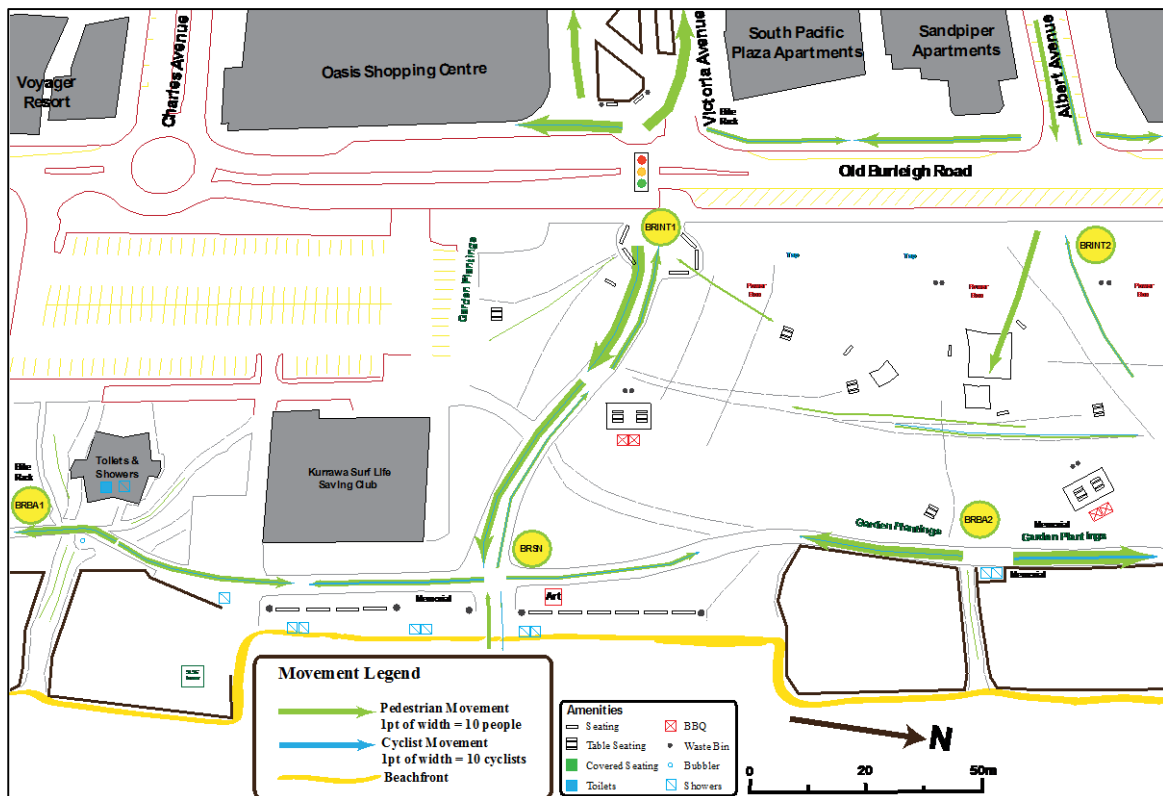


Figure 5.2.2: The Movement Patterns Observed in the Broadbeach Precinct (Author 2012)

There is an observable pattern of movement to the Robert Gatenby Boardwalk to access the view, but it is also noticeable that there is less movement onto and from the beach itself. The

covered children's playground in the foreshore park, adjacent to the south of the study area, is also a destination for visitors parking their car nearby, along Old Burleigh Road.

There is some sense that the pattern of movement appears to indicate the precinct is used by people as a unidirectional space, and that people were moving through and using the precinct as an exercise space. This is inferred from the lack of people observed returning along the same pathway during the period of the observations. It also appears probable that some people are using circular routes for exercise purposes in the precinct.

5.2.3 Movement Patterns in the Burleigh Heads Beach Precinct

The most movement activity in Burleigh is along the transit path parallel to the beach with the highest levels found along the path at BHBA2. This section of path is also used to access the covered children's playground, sheltered and shaded seating and table sets, toilets, showers, the beach viewing platform and access point, as well as a route inland to the bus stop and retail facilities along Connor Street and the Esplanade.

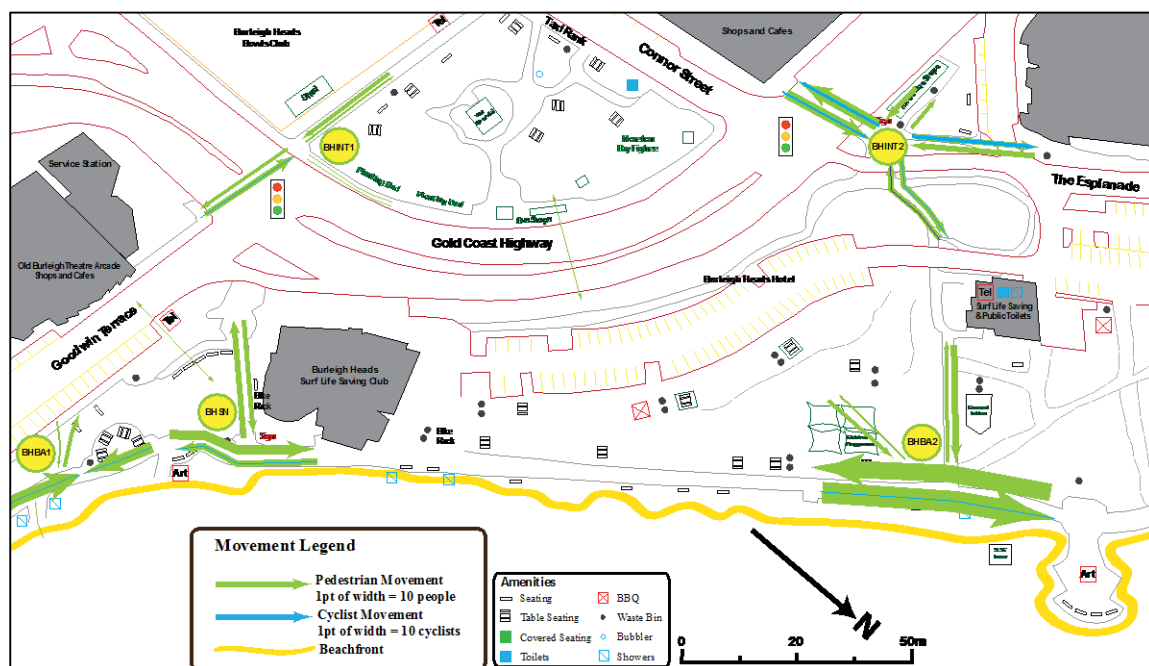


Figure 5.2.3: The Movement Patterns Observed in the Burleigh Heads Beach Precinct (Author 2012)

The observations indicated that BHINT2-to-BHBA2 is preferred over BHINT1-to-BHSN as a route to and from the beach for access to the public transport and retail facilities of the principal built form. The path to the beach from BHINT2 also appears to act as a visual gateway to the beach and the facilities in the foreshore park, with the views to the beach attracting people to the route. The Anzac Memorial Park does not appear to be a frequent

destination for users of the precinct, although it was observed to act as route by a few people from Connor Street to the beach across the highway.

In the Burleigh Heads beach precinct most people stayed on the paths, although some were observed moving through the parkland either to access the children's playground or using the seats and tables in the parkland. A few people also moved across the parkland to access the large car park, The Esplanade, public toilets and covered seating areas.

Some people were observed to return from the Surf Life Saving Club after passing the BHBA2 observation point. It is thought that the club house may be a 'turnaround point' for people using the transit path for exercise, as well as a destination in its own right for people to access the café, bar, amusements and restaurant located in the club.

Burleigh Heads would appear to be the most diverse of the three case study areas in terms of types of users. This is probably related to the accessibility of the car parks to the views to and along the beach and ocean, available along the traverse pathway between BHBA1 to BHSN to BHBA2. The spatial compactness and proximity of views, physical access and supportive public and commercial infrastructure found in the Burleigh Heads beach precinct is unusual in the Gold Coast.

5.2.4 Movement Patterns in the Mermaid Beach Precinct

The movement pattern in the Mermaid Beach Precinct indicates that the spatial arrangement of the public and private spaces in this precinct strongly influences patterns of movement. It is noticeable that movement along Hedges Avenue other than by vehicle is dominated by cyclists (Figure 5.2.4). Compared to the other precincts, movement activities in Mermaid Beach are at very low level.

Walking is only significant in the precinct for movement between the beach access at MBBA1, car park and the cafe and SLSC building, and for walking along the beach. The two way cycling lane in the one way traffic system of Hedges Avenue appears to be an attractive alternative to the highway for cyclists (Willoughby 2011b).

The hard edges of separation of buildings, private property, fencing, land use and public space would appear to have had a marked effect on movement patterns in the precinct. Although cyclists were a significant group, they were restricted to travelling along Hedges Avenue.

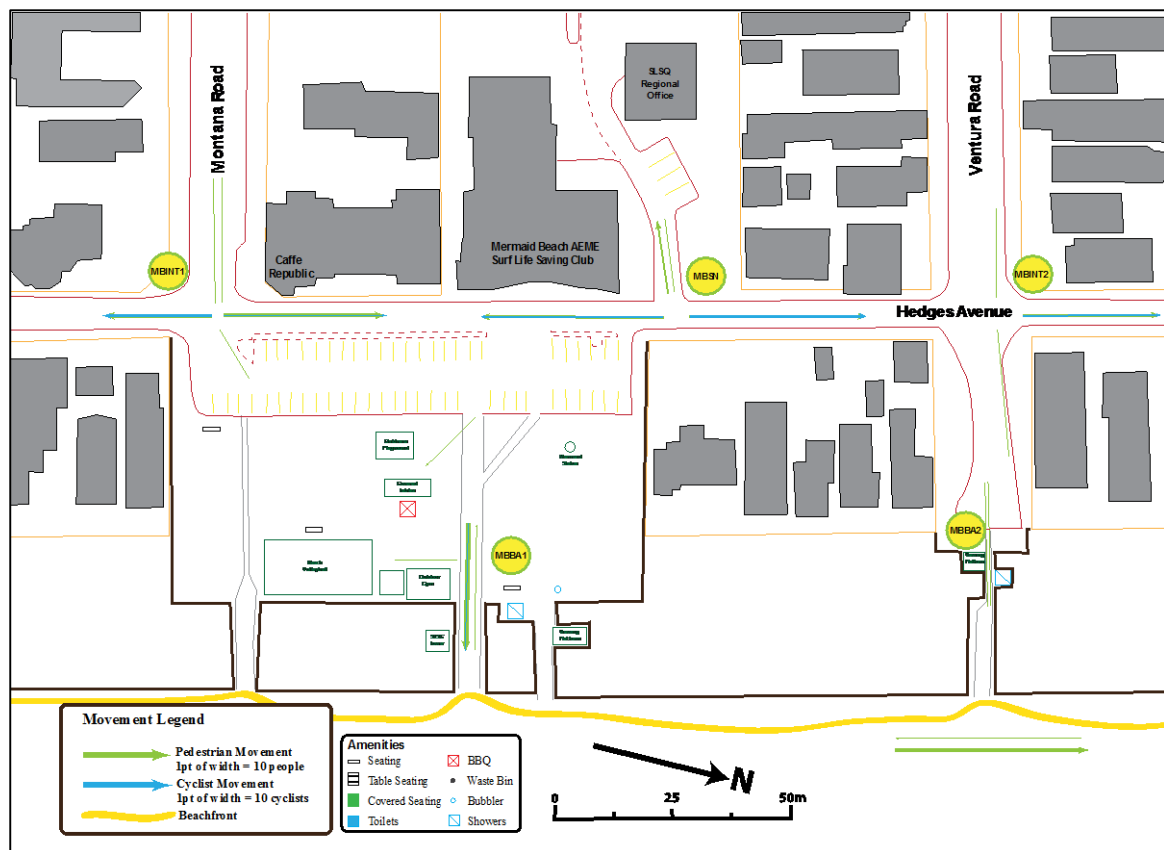


Figure 5.2.4: The Movement Patterns Observed in the Mermaid Beach Precinct (Author 2012)

Joggers may be choosing to use the beach and, during the observations, were often hidden from view by the dunal profile. They may prefer a more pleasant environment for jogging than Hedges Avenue with its poorly maintained narrow footpaths, frequently intersected with blind driveways emerging from behind the high walls of the beach front homes. People reversing their cars out of hidden driveways in the suburb have resulted in serious accidents and even the death of a pedestrian (Elder 2011).

Having considered the relationships between the urban design of the different types of transitional locations and the movement patterns of people in the different types of beach precinct of the study, we move on to the collection and analysis of the way people choose to visit the beach precincts in the different social groups of age and gender that were observed at the transitional locations of the field observations.

5.2.5 The Social, Age and Gender Patterns Found in the Beach Precincts

When the movement data collected was analysed, couples were found to be the single largest visitation category of people recorded in the beach precincts. The number of people in groups of three or more was low, and tends to indicate that beach precincts attract people mostly as

individuals or couples. The only observed group of seven plus people was of eight young adult males cycling along The Esplanade through Burleigh Heads (Figure 5.2.5a).

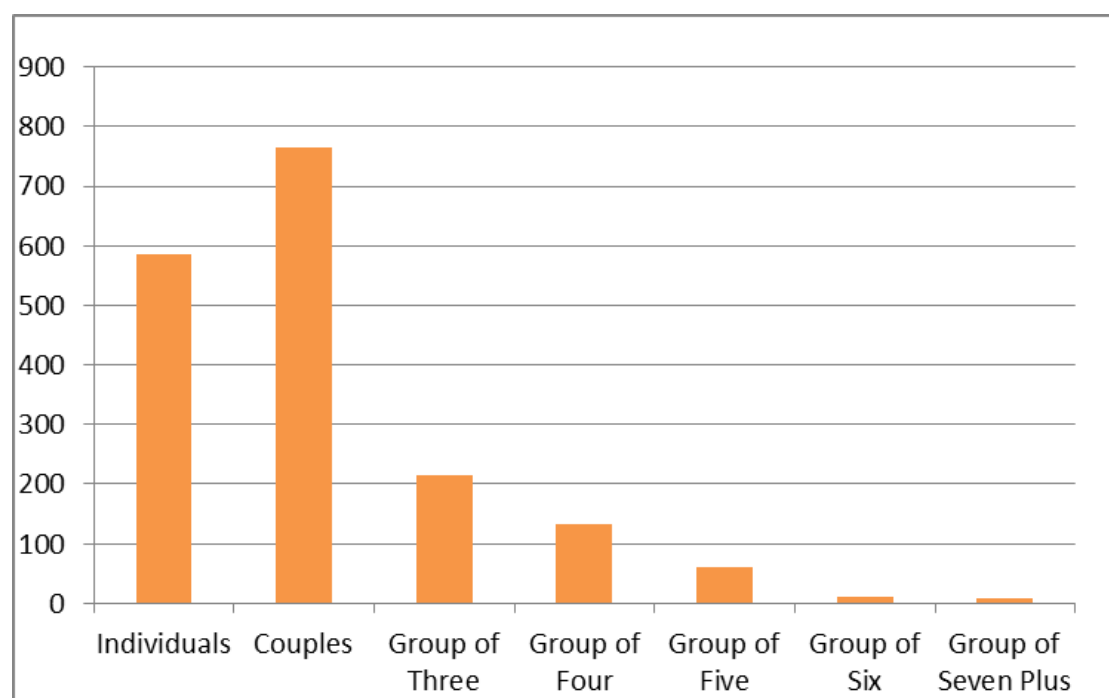


Figure 5.2.5a: Observed Incidence of Individuals, Couples or Groups in the Beach Precincts (Author 2012)

The age and gender structure of the individuals and groups was also compared to the age distribution pattern of the Australian population (Australian Bureau of Statistics 2010a). Taking into consideration that genders across the age groups are, more or less, equally distributed in the general population, there is a prevalence of males in all age groups, although only marginally so in older adults.

The exception to this is younger adults, where young women are more evident than young males, although younger adult males are still present in larger numbers than would be expected from their presence in the general Australian population. There may be a range of reasons for this. Young males may use the beach precincts more outside of the observation periods, or there may be other reasons that they do not use the beach precincts as much as younger women. Young adults for instance were observed to be prominent in Broadbeach and Burleigh Heads engaged in jogging or cycling. However, the overall picture is one of over-representation amongst young adult males and women along with adult males, and under-representation of adult and older women (Figure 5.2.5b).

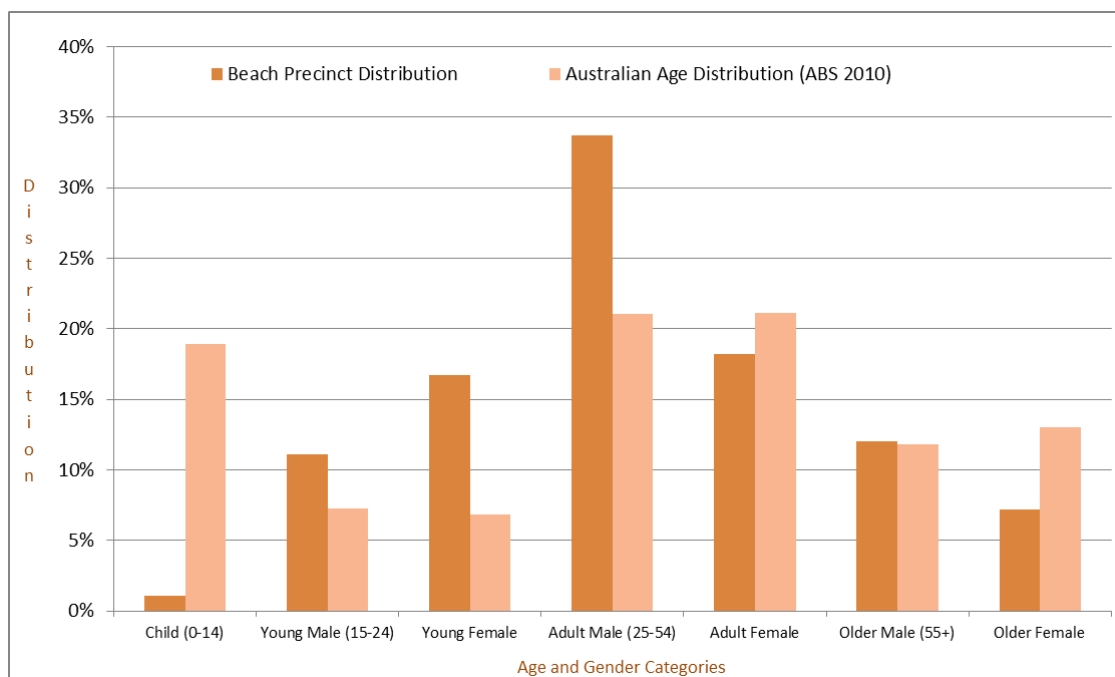


Figure 5.2.5b: Observed Distribution of the Age and Gender of People in the Beach Precincts (Author 2012)

The adult male dominance of the beach precinct as an individual and in membership of groups is of interest and it appears to indicate that beach precincts are an adult male domain. This is reflected in the way adult males make use of the beach precinct. The influence they have, and have had, over the design of public and private spaces and in the provision of supportive infrastructure and facilities in beach precincts may be due to their dominance in the design, planning, building, and governance professions, particularly in the senior and decision making roles (Mathewson, Stead and Burns 2012; Todes, Malaza and Williamson 2009).

Older women are a group that were expected to figure prominently in the use of the beach precinct and it is not clear why they are so poorly under-represented, even compared to older males. The incidence of individual younger women may also be a significant indicator of the perceived degree of safety in the different beach precincts. It may also be one of the reasons for the disproportionate adult male presence (McDowell 1999).

Older women may not be confident, singular users of the precincts despite the potential mental, physical, social and health benefits of the beach precinct for this particular age group (Maller *et al.* 2008). There is some evidence that older people perceive the sort of straight path shared with cyclists and skateboarders, found in the Gold Coast beach precincts, as an undesirable place-related urban design element that deters them from walking (Burton, Mitchell and Stride 2011).

When the age and gender pattern of people cycling in the beach precincts is considered, young adults and adult males can be seen to dominate cycling as an activity in an age distribution disproportionate to the Australian population (Figure 5.2.5c). This may indicate that recreational health and fitness are major motivational factors for young adults and adult males in visiting beach precincts (Dworkin and Wachs 2009).

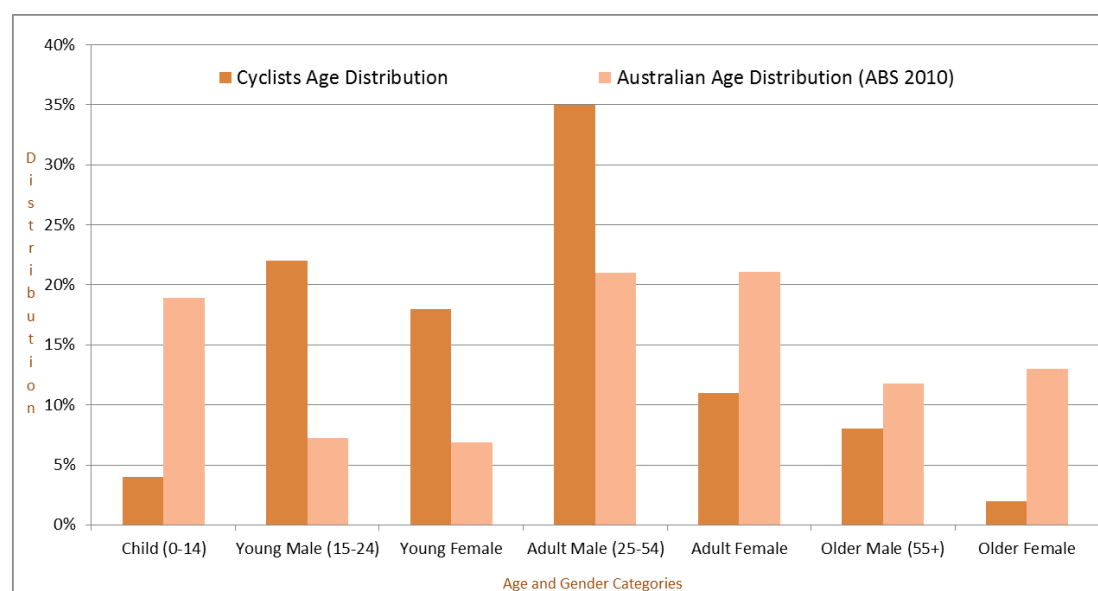


Figure 5.2.5c: Observed Incidence of Age and Gender of Cyclists in the Beach Precincts (Author 2012)

The age and gender distribution of adult males in cycling, and other activities in the beach precinct, and the relative absence of older females calls into question the claims of the Oceanway project group and cycling advocates that the project ‘offers a wide range of recreational opportunities for residents and visitors of all ages and fitness levels’ (Gold Coast City Council 2014c).

The need for walking to maintain mobility in an ageing population has been identified as a major public health issue (Department of Health and Ageing 2010, Pahor *et al.* 2014) and the evidence shows that the benefits of walking for people from the age of 45 on for women (Feskanich, Willett and Colditz 2002) and men (Feskanich, Flint and Willett 2014) in maintaining bone density is significant in retaining mobility for older people. However, older cyclists will experience higher rates of osteoporosis that limit future mobility (Nichols and Rauh 2011).

The analysis of the age and gender social distribution in the beach precincts reveals a similar pattern of adult and male dominance of the precincts that is disproportionate to their presence in the general Australian population. The single largest social group observed was the adult

male and adult female couple, followed by the older male and older female couple (Figure 5.2.5d).

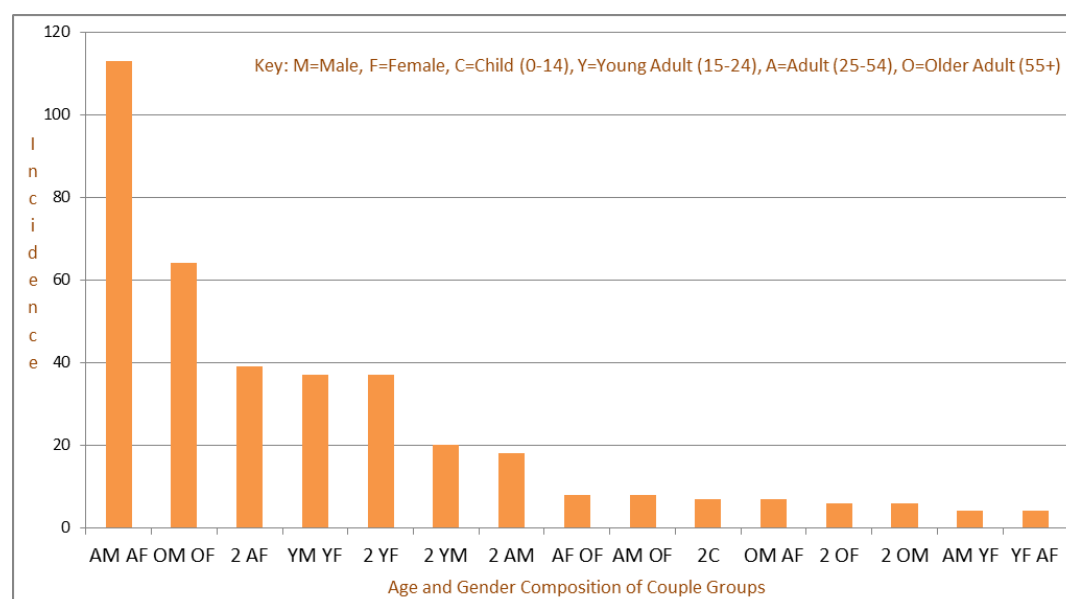


Figure 5.2.5d: The Age and Gender of Couple Groups in the Beach Precincts (Author 2012)

The older adult couple group may partly explain the relative absence of the individual older female in the individual user analysis. The analysis implies that older women may prefer to visit beach precincts in company of older male partners. Older women are also found in groups consisting of an older female with adult female and adult male suggesting family relationships may also be important in motivating older women to visit beaches.

The preference for visitation within generational groups is also indicated by this analysis. This is reflected in the analysis of the generational or intergenerational composition of couples and groups that indicated twice as many people visit in a single generation group. The top seven observed groups are all same generation combinations. There were also seven instances of two children as a couple moving in the precinct.

Groups were further analysed by the presence or absence of a child in the group, in order to reveal the care patterns for children in beach precincts and to examine if there were any observable differences in the structure of groups by the categories chosen. The groups with and without children as a component were further categorised from the group observations in order to investigate the structure of childcare in beach precincts. This revealed that the ratio of groups with and without a child was approximately 2.4:1 in favour of groups with children. This makes groups with children the third largest category of visitation to the beach precincts, after couples and individuals (Figure 5.2.5e).

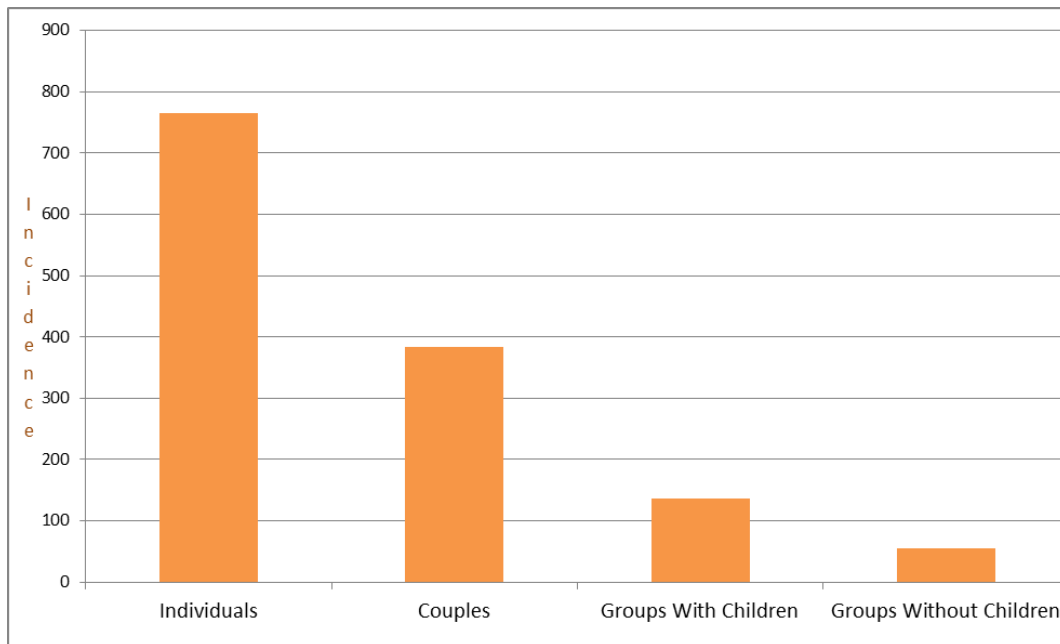


Figure 5.2.5e: Incidence of Individuals, Couples and Groups With and Without Children (Author 2012)

The principal carer groups observed were a single child with either an adult female or young adult female. However, adult males were observable both as the primary carer and in a family combination with a female/s. This situation gives some indication that males play a supportive role in child care along with and to lesser extent older women (Figure 5.2.5f).

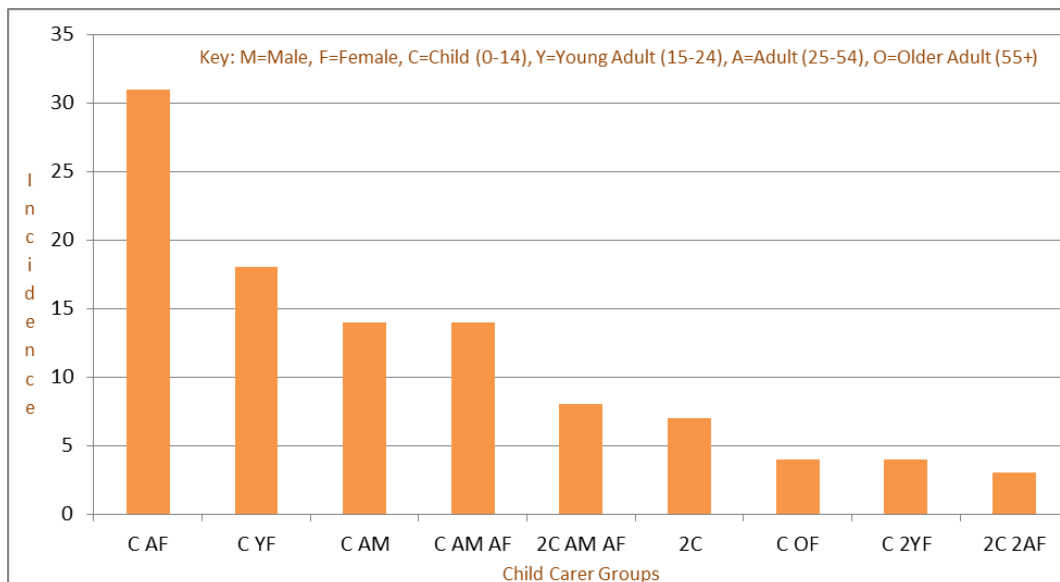


Figure 5.2.5f: Incidence of Child Carer Groups Observed in the Beach Precincts (Author 2012)

A table of the lower incidence child carer groups was compiled (Table 5.2.5a). This table tends to confirm that younger and adult women are the core of the carer groups for children in beach precincts, in a variety of groupings. Adult males can also be seen to play an important part in forming the group structures for care of children at beach precincts, as

indicated in the analysis of the pattern of the principal child carer groups shown in table 5.2.4a. This table shows children in groups with carers from one demographic category in black, children with carers from two demographic categories in blue and children with multiple demographic categories of carers in red.

Table 5.2.5a: The Lower Incidence Child Carer Group Structures by Age and Gender (Author 2012)

	Young Adult	Adult	Older Adult
Child Carer Groups With a Male	C YM YF (2) C AM YF (2)	2C AM (2) C 2 AM (1) 3C 2AM (1) 3C AM AF (2) 2C AM 2AF (1) C AM 2 AF (1) C AM YF (2) C OM AF (2) 2C AM 2YF OF (1) 2C AM AF OF (1)	C OM OF (1) C OM AF (2) C OM OF (1)
Child Carer Groups Without a Male	2C YF (2) 2C 2YF (2) C 3YF (1) 2C 3YF (1) C YM YF (2) C YF AF (2) 2C YF AF (1) 2C AM 2YF OF (1)	C 2AF (2) 2C AF (1) 3C AF (1) 2C AF OF (2) C YF AF (2) 2C YF AF (1) C AF OF (1)	2C AF OF (2) C AF OF (1)
Key: C = Child, M = Male, C=Child, F =Female, Y = Young Adult (15-24), A = Adult (25-54), O = Older Adult (55+).			

Younger and older adult males appear to be the least important component of the social grouping for child care in the beach precincts. This may be due to social and cultural barriers that discourage participation in child care of these two demographic groups (Tronto 2013).

A table of the observed incidences of the social structures of groups without children was also compiled (Table 5.2.5b). It reveals a similar pattern to the groups that include children where groups with adult males and women are the dominant component. A pattern of groups that consist of intergenerational groups with age adjacency is also noted. This is more marked amongst younger adults and older adults of both genders. The most diverse age group structures appear to be structured around adult males.

The presence of a large, mostly female Greek Cypriot cultural group from Brisbane, celebrating the Greek Orthodox Easter, did create a number of new categories of group of adult women and older women and males. This group can be considered to have biased the

pattern of women in different categories in the foreshore-park during the Broadbeach observations. They occupied a covered seating and barbeque area between the Oasis Shopping Mall and Robert Gatenby Boardwalk and stayed the whole day in a location that is thought to be attractive for large social groups visiting the seaside.

Table 5.2.5b: The Lower Incidence Social Groups without Children by Age and Gender (Author 2012)

	Young Adult	Adult	Older Adult
Social Groups With a Male	3YM (3) 8 YM (1) YM 2YF (3) 2YM YF (2) 3YM 2YF (1) 3 YM YF (1) YM 2AM (1) YM 2 AF (1) 2YM 2AM (1) 3 YM YF (1) 3YM 2YF (1)	3 AM (3) 2YM 2AM (1) YM 2 AF (1) YM 2AM (1) 3 AM 2 AF (1) 2AM 2AF (1) 2AM AF (4) AM 3YF (1) AM 2AF (2) OM 2AF (1) AM YF 2AF (1) AM YF AF (1) AM OM AF (1)	3 OM (3) OM 2OF (2) 2 OM OF (2) 2OM 3OF (1) OM 2AF (1) OM 2OF (2) AM OM AF (1) OM YF OF (1)
Social Groups Without a Male	3 YF (7) 4 YF (2) YF 2AF (1)	3 AF (1) AF 3OF (2) AF 4OF (2)	3 OF (1) AF 3OF (2) AF 4OF (2)
Key: C = Child, M = Male, C=Child, F =Female, Y = Young Adult (15-24), A = Adult (25-54), O = Older Adult (55+).			

No other large groups such as this were present in any of the other observation points during the period of observations. This group also increased the observed incidence of older women in the overall movement and activity observations. It also changed the pattern of older males to older females that had been running at a ratio of 3:1 older males to older women before this group was observed and recorded.

The prevalence of walking as an activity for couples infers an activity preference, amongst those who visit the beach precinct, to go for a walk with a partner. The adult male presence in all activities indicates a more confident use of the beach precinct by this group. The patterns and incidence of adult and older women suggests that older women prefer going to the beach in a safe social group. This suggestion may be an important factor in designing strategies to encourage older women to visit beach precincts and other places.

Having considered the way the movement patterns and types of social groupings were observed in the different types of design solutions for beach precincts, we move on to the

analysis of the way that people engage in activities other than movement in the different transitional locations of the beach precincts.

5.3 Relationships of Activity, Amenity and Facility at Locations in the Beach Precincts

The field observations also collected the observed overall incidence of activities other than movement. These activities were further categorised as activities that were accessing amenity, facility and places or activities in spaces and places. Overall, the ratio of incidences of movement compared to activities other than movement was observed as approximately 3:1 in the three beach precincts.

Activity other than movement generally took place at greater distances from the observation points than the movement observations and involved people who were often staying for extended periods of time. This made it more difficult to categorise people by age and gender, especially on the beach and in the children's playground. This meant that the observations had to group people in coarser categories.

In comparison to the age and gender distribution of the Australian population as a whole, the adults and younger adults are over-represented, whereas older adults and children are under-represented in the observed incidences of activity other than movement, in a similar pattern to that observed in the previous section (Figure 5.3a)

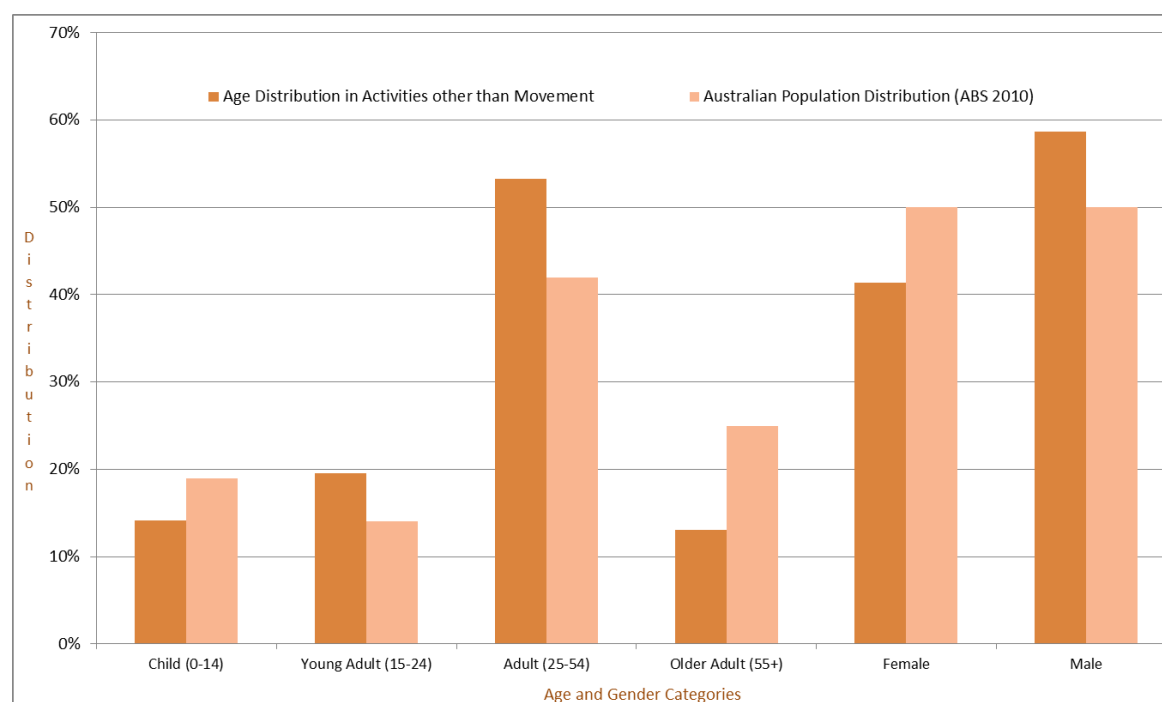


Figure 5.3a: Distribution of Ages and Genders Engaged in Activities other than Movement (Author 2012)

Children were more commonly observed engaged in activities other than movement compared to movement activities. This is in the context that the over-representation of adult males also occurs in many of the locations where there are children playing.

The social grouping of individuals, couples and groups engaged in other activities in the beach precincts shows a different pattern to those moving through the beach precinct (Figure 5.3b). There are fewer couples compared to individuals engaged in other activities, than couples compared to individuals engaged in movement. There is also a higher comparative incidence of groups involved in activity as opposed to movement.

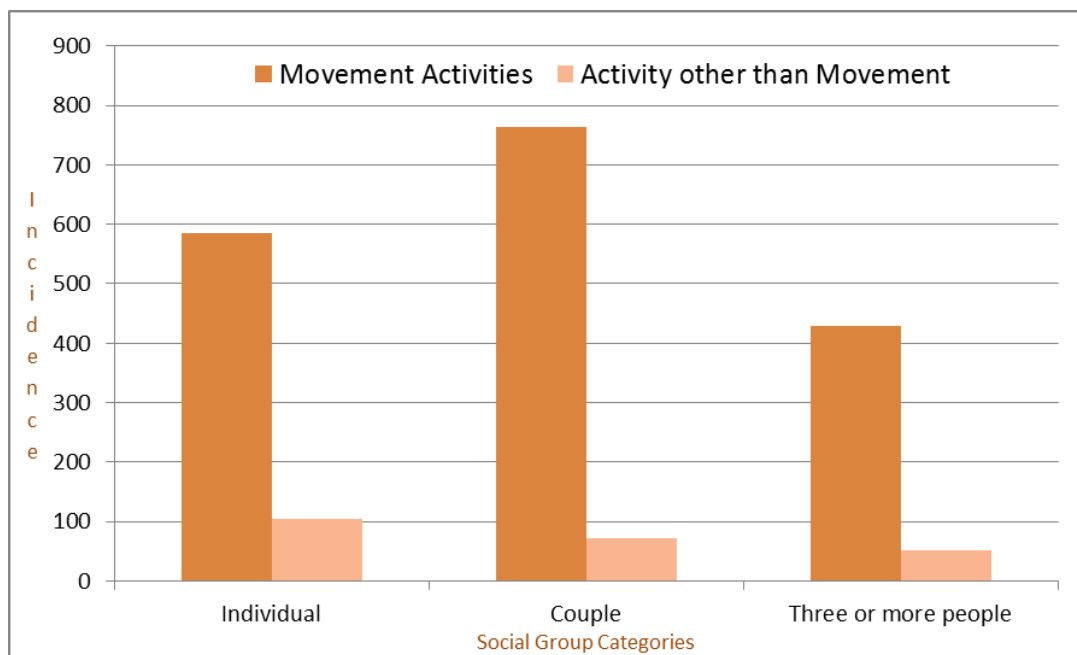


Figure 5.3b: The Incidence of Individuals, Couples and Groups Engaged in Movement or Activity (Author 2012)

The incidence of activities that were accessing amenity, facility or places was approximately half of the incidences of activities in space or place, although many people may have been moving from activity to activity. We now move on to examine the patterns of movement and other activities in the different beach precincts.

5.3.1 Patterns of Movement and Activity in the Different Beach Precincts

The patterns of movement and other activities in the different beach precincts identify the most and least active precincts and locations in those precincts. Despite the much larger foreshore park space in Broadbeach, Burleigh Heads, as a whole, is nearly twice as active in both movement and other activities.

There appears to be a relationship between movement and activity, and amenity and facility. This relationship is related to the incidence of people who travel past facilities and amenities: the more people travel past them, the more active those places will be, or as Jan Gehl (2006) observed ‘people go where people are’.

When the patterns of movement and other activities are considered, there is an inference of the existence of three broad categories of transitional location in those precincts with a foreshore park and traverse path along or near the beachfront:

- Walk to and **stay a while** destination locations, having a movement to activity ratio of around 3:1 (BRSN, BHBA1 and BHBA2).
- Walk and **pause** locations with a **promenading** or taking a leisurely walk function have a ratio of around 6:1 movement to activity pattern (BRBA1, BRBA2, BRINT1, BHSN and the Broadbeach and Burleigh Heads beach precincts as a whole).
- **Walk-through** locations to distant destinations have a pattern of movement to activity ratio over 8:1 (BRINT2, BHINT1 and BHINT2). Where the location is at a transition from built-to-access or access-to-beach form, the location also has an inferred **gateway** function. All the locations of the study have some form of gateway function with the exception of MBINT2, which is a movement only location.

The relationship which leads to the differentiation of places along the traverse corridor as promenade or stay places is thought by the researcher to be connected to how well the location meets activity and amenity preferences at the beach access location. The degree of invitation to stay can also be seen to be dependent on the nature of the transition from the foreshore park to the beach and ocean, and the design solution of the public facilities adjacent to the location.

Table 5.3.1a indicates that the ‘pause/promenade’ and ‘stay-a-while’ locations found along the traverse pathway are also beach access points in the foreshore park. All the ‘walk-through’ locations are found in the form changes along the transect paths where they intersect the built and access forms. The exception for this rule is found at the Albert Avenue and Old Burleigh Road (BRINT2) which has a movement activity ratio of 5:1. This is thought to be due to its being located on a route to the Oasis shopping Mall and Victoria Avenue for the visitors and residents of the resorts and apartment buildings in the area.

None of these relationships of categories of movement and activity to locations applies to the Mermaid Beach precinct which has no traverse path along a beachfront and a low to null incidence of movement to activity in the precinct. The pattern of categories here would seem to be beach access points as destinations with a low movement to activity ratio of around 1:1 at (MBBA1 and MBBA2), the SLSC movement to activity ratio of 2:1 (MBSN) and the Caffè Republic with a ratio of 5:1 (MBINT1).

Table 5.3.1a: Incidences of Movement and Activity by Observation Point and Beach Precinct (Author 2012)

Observation Point	Movement Incidences	Activity Incidences	Movement/Activity Ratio	
Broadbeach				
BRBA1	68	10	Promenade	6.8:1
BRBA2	39	6	Promenade	6.5:1
BRINT1	57	4	Walk-through	14.25:1
BRINT2	35	7	Promenade	5:1
BRSN	83	27	Stay	3:1
Totals	282	54	Promenade	5.2:1
Burleigh Heads				
BHBA1	52	13	Stay	4:1
BHBA2	200	68	Stay	2.9:1
BHINT1	79	8	Walk-through	9.8:1
BHINT2	109	6	Walk-through	18.2:1
BHSN	45	7	Promenade	6.4
Totals	485	102	Promenade	4.75:1
Mermaid Beach				
MBBA1	44	25	Destination	1.8:1
MBBA2	7	8	Destination	0.8:1
MBINT1	25	5	Destination	5:1
MBINT2	6	0	None	
MBSN	17	8	Destination	2.1:1
Totals	99	46	Destination	2.1:1

There is also the movement-only location at the intersection of Ventura Road and Hedges Avenue (MBINT2). The movement to activity ratio in the transitional locations in Mermaid Beach may be dependent on the attractiveness of each location as a destination. However, it is premature to infer distinctive relationships of movement and activity of the individual locations of this type of precinct at this juncture, without comparative studies of similar precincts.

The invitation of particular locations to participate in activities other than movement can also be considered using the summary of the urban design ratings from the walk-through analysis conducted in Chapter Four (Table 5.3.1b). For example, the direct connection from foreshore park-to-beach found in the Burleigh Heads (BHBA2) precinct along the traverse path and at

the boardwalk in Broadbeach (BHSN) creates a better outcome for diversity of activity, meeting human needs and a connection to the restorative environment.

This is in contrast to the managed access solutions through fenced dunes for the foreshore park locations found in Broadbeach and the pocket-park in Mermaid Beach. The Burleigh Heads urban design solution is far superior to the stub access solution of Ventura Road in Mermaid Beach (MBBA2) in terms of urban design outcomes.

At BHBA2 the concepts of behavioural needs and desires being dependent on the urban design principles of accessibility, diversity, human needs and scale and governance are demonstrable. The attractiveness of the urban design of such a place can also be gauged by comparison to the other beach access point of BRSN. Not only do more people travel to and past BHBA2 than BRSN, but more people stay for activity and extended periods at the Burleigh Heads beach access location.

Table 5.3.1b: Summary of the Urban Design Ratings of Beach Access Locations (Author 2013)

Urban Design Ratings						
Beach Access Location	Activity and Facility	Restorative Environment	Governance	Accessibility	Diversity	Human Scale and Need
BRBA1	2	2	2+	2+	2-	2+/1 <i>Day/Night</i>
BRBA2	2	3	3	3	2	3-/1 <i>Day/Night</i>
BRSN	4	4+	3+	3+	4	4+/2 <i>Day/Night</i>
BHBA1	3+	4+	3	3	3	3+/2 <i>Day/Night</i>
BHBA2	4+	5	4-	4+	6-	5/2+ <i>Day/Night</i>
BHSN	3+	3	3+	3+	3	3+/3- <i>Day/Night</i>
MBBA1	3	4-	3	2-	3	3+/1- <i>Day/Night</i>
MBBA2	1	2	2-	1-	2-	2/1- <i>Day/Night</i>
Key: BR=Broadbeach, BH=Burleigh Heads, MB=Mermaid Beach, SN=Social Node, BA=Beach Access, INT= Form Intersect. Rating Scale: very poor (1), poor (2), acceptable (3), good (4), very good (5) and excellent (6)						

The urban design analysis also identified factors which would deter people from choosing to walk to and stay at the different transitional locations, such as pathways designed for the use of cyclists rather than people out for a relaxed stroll, as are found along the traverse pathway travelling past the beach access points, especially if combined with cyclists travelling at commute or training speeds (Austroads 2013).

The design of the cycling corridor and provision of pathway lighting for cyclists for the Oceanway does not provide adequate lighting at night for people walking along the traverse and transect paths of the beach precincts. This situation of poor lighting and remote location in some places could be perceived as presenting a degree of danger to unaccompanied people, especially children, older people and women at night (AECOM and Lachlan Millar and Associates 2013).

People have little opportunity to rest or pause along the traverse path corridor in places with no shade, rest and shelter. Frequent shade and shelter is very important for walkers in a sub-tropical climate with high temperatures and humidity accompanied by very high to extreme UV levels (Bureau of Meteorology 2013b; Bureau of Meteorology 2013a). This would be particularly the case for older or less mobile people (Walford *et al.* 2011).

When the different types of activities are mapped against facilities it indicates where different activities and behaviours take place and how the design of the beach precinct either allows or inhibits the potential for activities. It is recognised that different activities may occur in these places at different times, according to the events and festivals that take place. However, these initial activity observations do indicate a basal relationship between the type of place and the behaviours that were observed to take place there.

In the Broadbeach precinct, the movement activities of walking, jogging, cycling, pushing a pram and walking a dog all take place along the traverse path and the transect paths in the precinct. However, activities other than movement are at low incidence and largely associated with the accessing the functional use of the nearby facilities or built environment elements (Figure 5.3.1a).

Broadbeach beach access point one (BRBA1) activities are limited to using the shower, drinking from the bubbler, and using the bench table near the car park or the timber car park barriers to sit or change clothes. The lack of activity-oriented facilities, along with the layout of car-parking, buildings and planting near the location of BRBA1 can be inferred to be

responsible for the lack of activities other than movement. The distance to the beach and ocean and the visual disconnect from the beach at this location and the similar location of BRBA2 also mean that activities on the beach cannot be clearly seen.

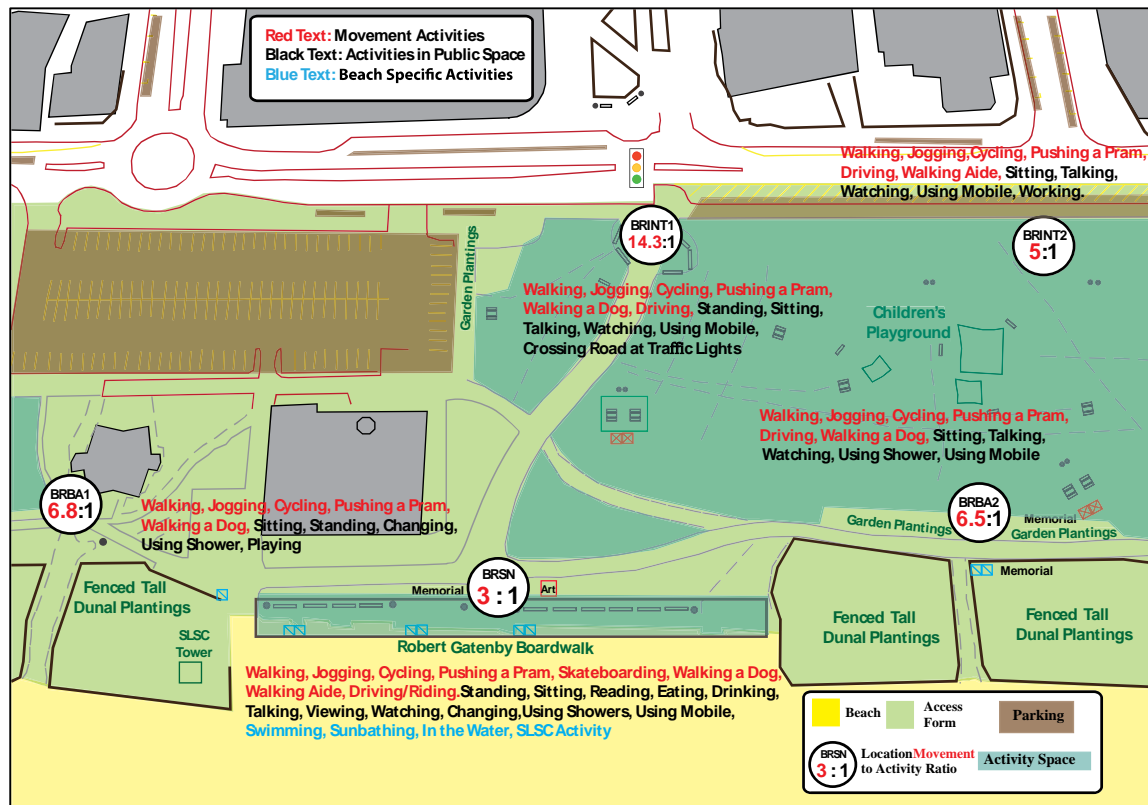


Figure 5.3.1a: The Pattern of Activities in the Transitional Locations (Author 2013)

The Robert Gatenby Boardwalk (BRSN) has the best visual and physical connection to a restorative environment and the most diversity of activity in the precinct. BRSN is the only location in the Broadbeach precinct that people were observed to stay and engage in activities which have a potential for social connection with strangers. Indeed, the initial activity observations tend to indicate that the Broadbeach precinct itself is poorly designed for activities other than movement, and the foreshore park is visually, physically and symbolically disconnected from the beach and ocean.

The movement patterns and activity at BRINT1 and BRINT2 in Broadbeach are clearly gateway locations. The activities that are associated with these gateway locations include standing, watching, sitting, and waiting to cross the road, catch a bus or meeting someone. If facilities permit, the locations can also be used to inform the visitor, provide shade and shelter and allow people to organise themselves, but such facilities do not exist.

The Burleigh Heads beach precinct is differentiated from Broadbeach by the volume and diversity of activities visible at all the comparative transitional locations. This is despite the space allocated to the Burleigh Heads foreshore park being smaller and less contiguous than is the case in Broadbeach (Figure 5.3.1b).

When the pattern of activities at the different transitional locations in Burleigh Heads is compared to those at Broadbeach, certain relationships of location and activity stand out. Firstly, there are visible beach activities along the whole length of the traverse path in Burleigh Heads, whereas in Broadbeach these are only observed at the Robert Gatenby Boardwalk (BRSN). Secondly, the diversity of activities and movement at the transition from built to access form is much greater in Burleigh Heads. Finally, the diversity and frequency of activities is greater at all the transitional locations in Burleigh Heads than the comparative locations in Broadbeach.



Figure 5.3.1b: The Pattern of Activities in the Transitional Locations in Burleigh Heads (Author 2013)

The Burleigh Heads beach access (BHBA2) has by far the highest incidence and diversity of activity than any of the transitional locations in the different beach precincts of the study. It would appear that the incidence of activities correlates with the adjacency of views, density of amenities and facilities that allows individuals, couples and groups in generational and intergenerational composition to meet their activity and behaviour preferences in the one location.

The location of BHBA2 is also notable for the movement and activity relationships which are associated with closeness and permeability of adjacent places and spaces. Children can move freely between the beach and the playground and still be supervised by adults who can sit, eat, talk, drink and socialise in groups whilst enjoying the views towards the sea, up and down the path and inland to the town.

It would appear that the stay-a-while and promenading locations are more useful locations for diverse activities. However, this relationship only seems to apply to the two beach precincts with foreshore parks. Mermaid Beach precinct, with no transect path along the beach, has a movement and activity pattern more obviously related to parking and visiting a single destination than the other two beach precincts. The routes are short and destinations are relatively close to parking for the visitor. Beachfront and suburb residents and SLSC members have privileged access to the benefits and amenities of the precinct (Figure 5.3.1b).

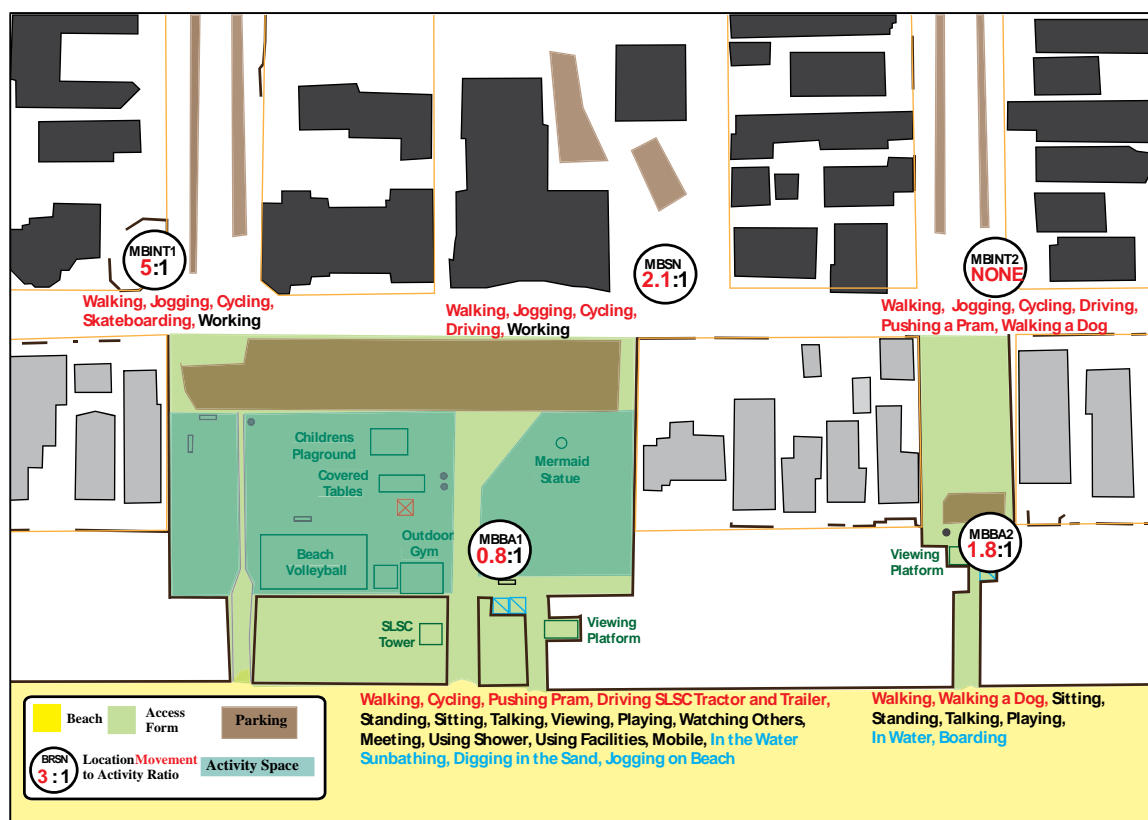


Figure 5.3.1c: The Pattern of Activities in the Transitional Locations in Mermaid Beach (Author 2013)

In the Mermaid Beach precinct the governance decisions for the location of private property boundaries demarcate the level of public and private access to the restorative benefits of nature. The relationship between activity, facility and access in the design solutions in this precinct is clearly reflected in the lack of activities recorded. Movement is largely confined to

Hedges Avenue and other activities are confined to the beach access locations, with very little incidence or diversity of activity.

It was noticed that those who came to meet, play, read, sit, talk, cook, eat and drink at the beach access location of MBBA1 did not move from the pocket park to access the beach, neither were they dressed for the beach. In a similar manner as at the Robert Gatenby Boardwalk location (BHSN), some people went to the viewing platform in the dunes for a brief look at the beach and ocean.

The stub beach access at the end of Ventura Road (MBBA2) had activities that were not noted in the other beach precincts. These activities tend to indicate the local nature of the users of the beach precinct. Most of the people who arrived at MBBA2 greeted others who were already there with a degree of familiarity. This familiarity and sense of localness and ownership was also demonstrated by the adult male who arrived with a dog and threw the ball into the fenced off dune area for his dog to chase and retrieve. There was also a young adult male who arrived by skateboard with a bowl of cereal and sat down on the viewing platform to eat it whilst observing the views.

The few people who visited this beach access point during the observations also talked to the researcher about the research and freely gave the opinion that they wanted it to remain unchanged. Some expressed the view that further development of the suburb was opposed by the local community and that they preferred the 'fibro shacks' to the more elaborate and expensive mansions which were replacing them, indicating that the current design solution suits the local residents even if it has little amenity for Gold Coast residents inland of the beach suburbs.

Most of the available public space in the precinct is allocated to traffic and parking along Hedges Avenue, Montana Road and Ventura Road. The Ventura Road location (MBINT2) does not have a movement to other activity ratio, as there are no public spaces in the vicinity for activity.

The location of the SLSC building (MBSN) had a movement activity ratio of 2.1:1. The most prevalent movement was cycling. The activities observed were entering and leaving the clubhouse, coming from and going to the car park and some activity associated with the building of a new home across the road from the club.

5.3.2 Activities Accessing Facility or Amenity in the Beach Precincts

The data was also examined for incidences of activity that access facility or amenity in the beach precincts. This data was aggregated from the observations conducted in all of the beach precincts of the study. The activities of using the viewing area, shade trees, showers and other activities are available to all users of the different beach precincts but waiting for or using the bus, bowls green, payphone or retail was only observed in Burleigh Heads.

The observed incidence of activity does not directly indicate the number of people engaged in the activity. For example, the incidence of using a shower could be by an individual or family group; using the children's playground could involve from 2 or 3 children to a large family group; using the bowling green always involved over 50 people.

The highest incidence of observed activity was using a shade tree to either sit or stand under or lean against (Figure 5.3.2a). Using the shower included taking a shower, washing feet or surfboard, filling a water-bottle or waiting to use the shower. Using shaded seating included sitting, viewing, eating, drinking, talking, reading and listening to music.

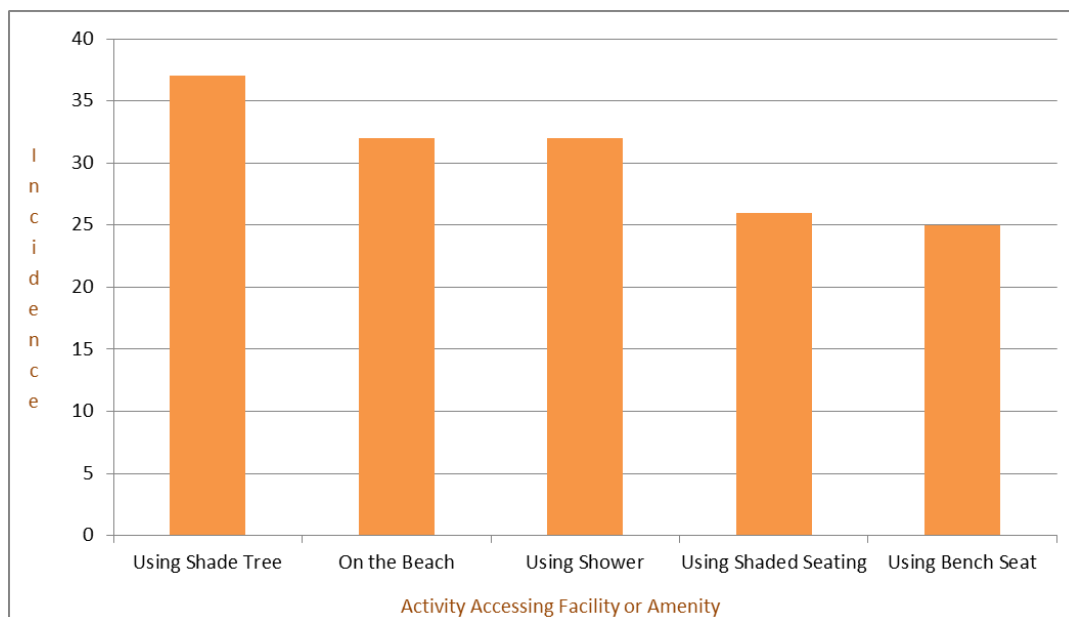


Figure 5.3.2a: The Highest Incidences of Activity Accessing Facility or Amenity (Author 2012)

On the beach the activities were: engaged in surf lifesaving activity; playing on the beach or digging in the sand; accessing or leaving the beach; jogging, sitting, sunbathing or walking on the sand; being in the water, body or surfboarding, and swimming in the sea. Of these activities the highest incidence activities were sunbathing (15), being in the water (10), and walking on the beach (8).

Using bench seats involved many of the same activities, but they were usually in the shade of a tree (23) or, exceptionally, in the sun (2). All these activities demonstrate the link between activity and the existence of appropriate amenities, facilities and places to meet people's preferences for activities and need for shade and shelter. Viewing requires the amenity of a vista; taking a shower or eating at a bench/table requires specific facilities; digging in the sand or swimming in the sea needs particular environments.

Other prominent incidences of activities that access facility or amenity included using the viewing areas (Figure 5.3.2b). A viewing area is present in each of the beach precincts, adjacent to the beach in Broadbeach, in the dunal area in Mermaid Beach, and extending into the beach space at Burleigh Heads. Burleigh Heads and Mermaid Beach viewing areas are unshaded, unlike Broadbeach. Using the grassed areas for sitting, standing, lying down, talking and reading was associated with shade from trees, views and proximity to other facilities.

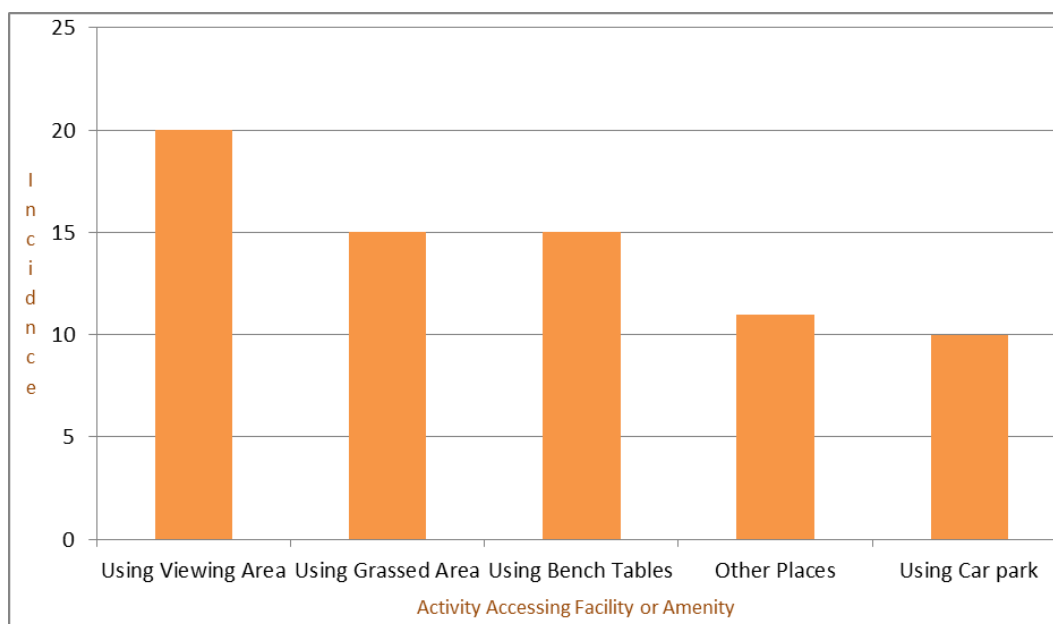


Figure 5.3.2b: Other Prominent Incidences of Accessing Facility, Amenity or Place (Author 2012)

Using the bench tables was also associated with shade (11) or being in the sun (4) with the same types of seated activities as found in the covered areas. The category of 'other place' included playing basketball against the wall at Kurrawa SLSC, throwing a ball for a dog to fetch in the fenced off dunes at Mermaid Beach, using car park barriers as impromptu seating and using seats and tents the owners had brought to the beach precinct.

The car park was also used to access the car for storage and sitting in, drinking and eating in and out of cars. Other incidental activities that accessed amenities, facilities or places include waiting for or using the bus (8), using children's play area (7), going into or out of the SLSC (6), using the water bubblers (5), accessing retail (3), cleaning or cooking on the council barbeques (3), using the bowls green, and using a payphone (2).

5.3.3 Activities Associated with Spaces in the Beach Precincts

The activities that occurred in a space, as opposed to activities that concerned accessing amenity, facility or place, took a wide variety of forms were nearly twice as common as the accessing activities. The observed frequency of incidences of activity in spaces and places in the beach precinct found that sitting, watching people and viewing are the most common activities observed (Figure 5.3.3a).

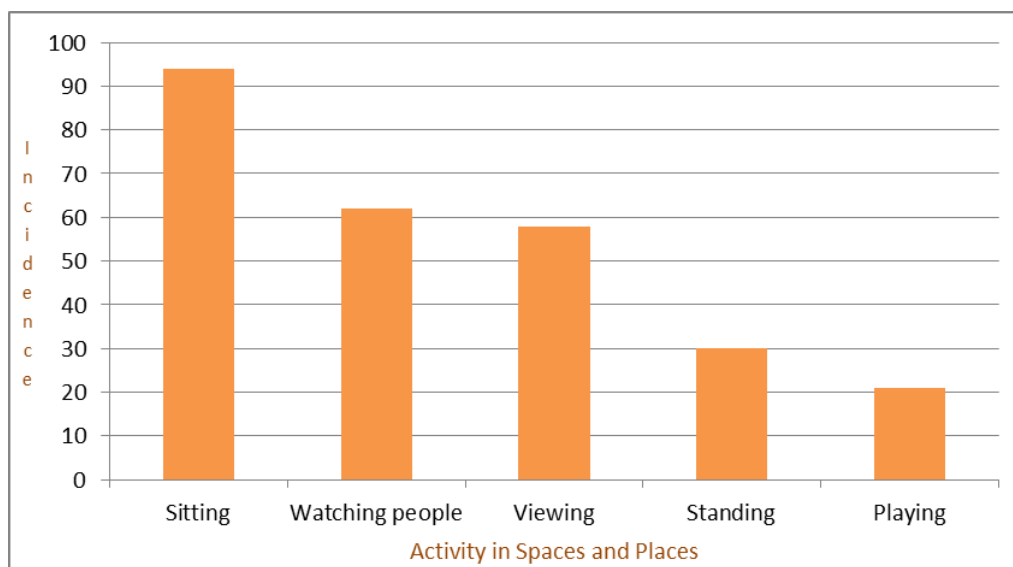


Figure 5.3.3a: Highest Incidences of Activity in Spaces and Places (Author 2012)

Sitting is the most commonly observed activity in the spaces and places of the beach precincts with people choosing to sit in the shade over sitting in the sun, by a ratio of over four to one. This is thought to be contextual to the Gold Coast and other places with tropical and subtropical climates and high ultra-violet levels. It may not hold in colder climates where people are more likely to want to sit in the sun (Cooper, Marcus and Francis 1998).

Watching people and viewing correlate and are often simultaneous activities in the beach precinct especially on the edges of spaces or the interfaces of beach, foreshore park and built environments. Watching people and viewing, as activities, also converges with the expressed reasons for visiting the beach precinct and reported purpose of visitation (section 5.4).

People also watch other people and take in the views whilst walking, although it is more difficult to observe this activity than when people are sitting or standing. However, it could be expected that people are frequently doing this when walking as part of what Kaplan (1996) described as the fascination of the natural environment that plays a part in the restorative effect of the beach precinct (see section 4.0.5).

Standing is also frequently associated in the observations with watching people and viewing, although sitting is obviously a preferred behaviour. For someone who is walking for pleasure in the beach precinct, standing against or under a tree or on the edges of facilities like the children's playground is also a function of pausing and observing and being ready to move on.

Having places to stand out of the flow of movement, but in sight of an activity or view, was also observed as a common activity in the beach precinct. Playing is associative with places in the beach precinct such as playgrounds, the beach and near covered tables and seating. The only incidences of organised sport were at the Burleigh Heads Bowls Club where over fifty club members were observed playing mixed bowls games on several occasions.

Other prominent incidences of activity in space and place observed in the beach precincts included talking, drinking and eating (Figure 5.3.3c). Talking was often associated with the other activities of sitting and standing, and spaces such as beaches and parkland, and at places like the children's playground, viewing platforms, seating, tables and covered areas where people were stopped and staying in a place.

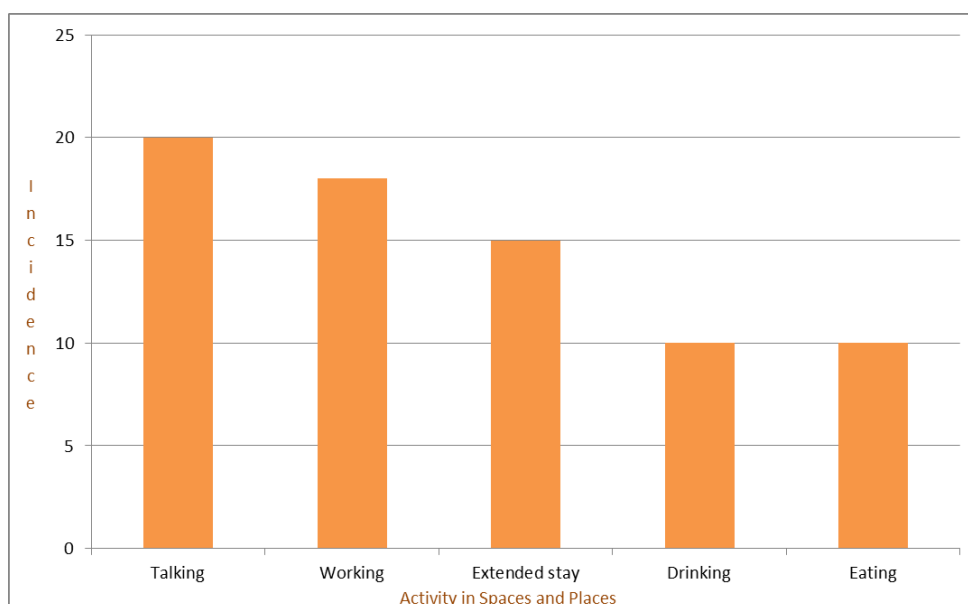


Figure 5.3.3b: Other Prominent Incidences of Activity in Spaces and Places (Author 2012)

Drinking and eating were also often associated with the activities of sitting and talking and the places where people had stopped for other activities, such as viewing, meeting or supervising children.

Extended stays- where people in the park were recorded as being present in the same space or place in a sequence of observations - was associated with activities such as sitting, reading, working, watching and viewing. Extended stays were primarily observed as taking place at prime viewing seats, covered seating with tables, and the beach edges of the foreshore parks.

The incidence of reading (9) in the beach precinct was largely associated with the bench seats along the beach edge at Burleigh Heads near BHBA2. This situation implies people felt comfortable reading here and that they were relaxed and not overly distracted by those passing by. This situation is interesting, as there was a high traffic volume along the path behind the people sitting on benches, and the seats were not always in shade (Figure 5.3.3c).

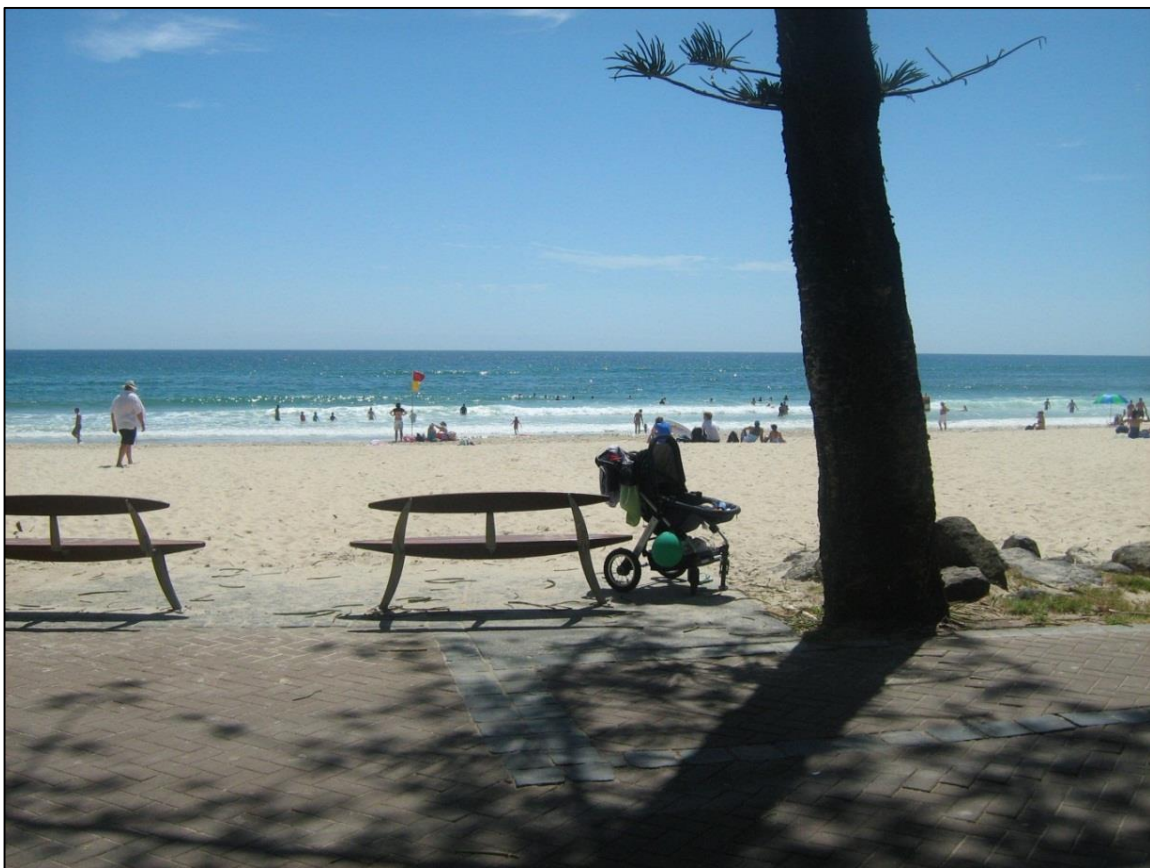


Figure 5.3.3c: Popular Seats for Reading, Watching and Viewing at Burleigh Heads (Author 2012)

It is thought that the attractiveness of the views overrode the inclination people have for a quiet, partly enclosed, shaded place to read. It may also be that people are using the books for

light reading, interspersed with watching and viewing, and as a qualifying purpose to extend their stay and use of the seats.

Other incidences of observed activity in the beach precincts that occurred with some frequency were supervising children's play (7), meeting others (6) and using mobile phones (5). Supervising children's play was closely associated with the children's playgrounds, covered seating and table areas. Meeting others was associated with trees and shade, being just off a pathway and with people working in the precinct.

The research in Chapters Two to Five has revealed the relationships of movement and activities other than movement associated with characteristics of the governance and design solution (Section 4.5) for the transitional corridors, locations and edges of the beach precinct.

The preceding sections 5.3, 5.3.1, 5.3.2 and 5.3.3 have demonstrated patterns of activity that are related the chosen design solution. This indicates that the research proposition (Section 1.8.2) that the 'chosen design solution of the built and natural environment in the particular case of a beach precinct is predictive of the opportunity and choices for activity and behaviour in the beach precinct to fulfil the needs and desires of visitors and residents of that beach precinct' has been justified by the research.

We now move on to conduct an inquiry by questionnaire into the preferences and expectations for use and activity of visitors to the beach precincts.

5.4 Inquiring into Preferences and Expectations for Beach Precincts

Having observed the relationships and patterns of activity associated with the different transitional locations in the beach precincts of the study, we now move on from the field observation of the behaviours people exhibit in particular places to people's stated preferences for social visitation and activity. This section will inquire into the public's preferred types of beach precinct development, public access, facilities and supportive infrastructure that is associated with beach precincts.

The design of the questionnaire was based on the literature review in the previous chapters (Chapters Three, Four and Five), in particular the literature that described people's activity preferences and the intent of visitation associated with public access to the beach. Topics identified in the urban design typology and walk-through urban design analyses (Chapter

Four) and the textual analysis of the informal literature surrounding public access to beach (Section 6.1.3) also provided information to support the design of the questionnaire.

The development of the questionnaire was assisted by reports which sought to understand the social, cultural, economic values and visitation and use preference that people have for seaside destinations. The first was a report for the Australian Government's Sustainable Tourism Cooperative Research Centres Program (STCRC) by Raybould and Lazarow (2009) on the economic and social values of beach recreation on the Gold Coast. The second was an article by Oh, Draper and Dixon (2009) on the multi-attribute preferences tourists expressed for beach access, parking fees, crowding and noise, commercial development, rules and regulations in South Carolina, USA.

The information in the report by Raybould and Lazarow (2009) was particularly influential, as the mail out survey on which the report was based considered responses from a sample (n=1862) of Gold Coast City residents in 2008 that was beyond the scope of this thesis. The questions in the report sought to understand the social and economic value of the Gold Coast beaches to local residents.

The residents were asked how many times they visited the beach, which beaches they visited and the reasons that influenced their choices, the activities they preferred to participate in and the values and attitudes they expressed for the beach, parks and foreshore, as well as the importance of the proximity of the beach had on their decision to live where they did.

The report by Raybould and Lazarow (2009) also examined the preferences the people held for beach management, social atmosphere, attitudes to development and the level of commercial activity. The report explored people's opinions on planning, and the issues of parking, environment and development. Interestingly, the age of the respondents indicated that older adults were over-represented in the response rate, which the author attributes to their having more time to complete mail surveys.

The questionnaire for this thesis was not conducted for statistical purposes, as the sample size required for the data collection to be meaningful statistically would be impossible to achieve with the time and resources available. However, it was structured to gather as much information in as short a time frame as possible.

Before the respondents were invited to participate in the research, they were asked to confirm that they were at least 18 years old. The nature and intent of the questionnaire was explained

as trying to determine the public preferences for the urban design and spatial layout of the beach precinct. In particular, it was explained that the research was trying to understand which natural and built features the public prefers and expects in the design of beachfronts.

5.4.1 The Design of the Questionnaire

When the questionnaire was first designed it was expected that there would be enough interest in the research from the public to limit the inquiry to an intercept questionnaire in the selected beach precincts. However, it quickly became obvious during the initial field observation visits that there would not be enough intercept responses for the purposes of the research.

The low response rate of the intercept questionnaire (n21) during five weeks of field observations necessitated the creation of an internet questionnaire (n49), adapted from the intercept questionnaire, giving a total sample size (n70). As many questions as possible were kept consistent in both forms of the questionnaire, although some questions had to be adapted or modified.

A slip with the address of the internet link was given to those people in the beach precincts who indicated they were interested in the research but who were unable to stop at the time to complete it. Posts were also made to Facebook™ pages for Broadbeach, Burleigh Heads, Mermaid Beach and Surf Life Saving Queensland inviting members of the public to participate in an online survey with a link to the questionnaire.

In designing the questionnaire (Appendix C) the data fields were intended to gather information about the age and gender of respondents, so that responses could be compared across the different categories. It was thought the age and gender categories would provide a degree of comparison with the distribution of different age groups and genders observed using the different beach precincts during the field observations and their distribution in the Australian population.

The respondents were asked if they were visiting with family, friends, both or other, how many there were in the group and with whom they were visiting the precinct. In order to collect some identity and origin information on the respondent, question 5 inquired into the respondent's affiliation with surf lifesaving. There was an alternate internet question that also asked if people preferred to visit with a pet, alone, with family, friends, both or other and the respondent was asked to rank the importance of that relationship when visiting a beach.

Question seven inquired where the respondent normally lived to establish the degree of local visitation. Other literature had identified most beach precinct users as originating locally, with a decaying inverse ratio of visitation the further they lived from the precinct (Raybould and Lazarow 2009). The question was also asked to establish the presence or otherwise of tourists from the region, Queensland, other states and internationally (Powell and Muldoon 2005).

The intent of questions 12 and 13 was to gather information on the purposive use of beach precincts, to triangulate with other sources of information including the field observations and to examine the degree of fit of the purpose of visit to the provision of amenity and facility by the governing authority for the different users of the beach precinct. Eighteen facilities identified from the literature (Oh, Draper and Dixon 2009) and field observations as commonly in, or adjacent to, the beach precinct activity areas were included. The questions were intended to understand the frequency and implied importance that respondents assigned to the different activities and facilities in the beach precinct.

The intent of question 14 was to inquire into the respondent's tolerance for parking fees. The parking charge were deliberately expressed as daily rather than hourly so the responses could be compared to the data collected by Oh, Draper and Dixon (2009) and give some idea of the willingness of Australians to pay for what is, currently, usually convenient and free parking provision in the beach precincts of the study.

Question 15 inquired into the willingness of visitors to tolerate behaviours and activities that had been identified in various sources as either restricted already or a cause of some conflict. On the internet version, respondents could also choose to select 'no restrictions' as a response. The respondent was given permission to select as many activities would like to be restricted as they wished. These topics were selected from the analysis of the literature and in particular topics that arose in articles on the topic of public access to beaches (Section 6.1).

The next question was asked to elicit suggestions from the respondents about preference for activities that may not have been available or mentioned so far in the questionnaire. This question had a short response space and was intended to include the experiences of activities of different types of beach precincts to those found on the Gold Coast.

Question 17 asked respondents to make suggestions for facilities the visitor would like to see in the beach precinct. This question was seeking the opinion of beach precinct visitors for

their preference for types of beach development found in other seaside destinations, but not necessarily in evidence on the Gold Coast. The question was partly closed as some common examples were given but respondents could also give short responses.

The preferred types of built environment were the subject of question 18, which sought opinions on the different types of beachfront development in beach precincts. Options were for development types commonly found on beachfronts that allow or restrict public access and provide different types of built environments. Respondents were invited to select preferred types of beachfront development and comment if they wished. It was understood to be a high risk question as the public do not necessarily understand the beach in urban design and planning terms. It was also deliberately late in the sequence of questions in the expectation that respondents would have more focus on beach precinct development at this stage in the questionnaire.

The last questions were intended to investigate the values and preferred features of beachfront or seaside destinations. The respondents were given a short response space to express the values they held for their preferred or ideal beach precinct built environment. The term 'seaside' in the question replaced 'beachfront' in the internet question as it was considered to be a term that would be more easily understood by the online respondents.

On the online version there was an extra question: 'do you think the law should be changed to prevent beaches being privatised by beachfront development?' The question was asked to gauge support for changes to the law of beachfront development and to compare it to other surveys of opinion on public access to beaches known to the researcher (Cartlidge 2011b).

5.4.2 Respondent Identity and Visitation Preferences

This subsection discusses the identities of the visitors and their preferences for different beach precincts, reasons for visiting, frequency of visit and preferred social grouping.

The Age and Genders of the Questionnaire Respondents

The completed internet and intercept questionnaires asked the respondents to identify their age category. Figure 5.4.2a shows the age distribution of the questionnaire respondents. The response rate of women to males is similar to the prevalence of women responding to the mail survey conducted by Oh, Draper and Dixon (2009), who also reported high rates of older respondents in their sample.

The '45-54' age category had the largest incidence of response to the questionnaire. There were no respondents in the older demographic groups. The distribution of age and gender of questionnaire respondents contrasts to the pattern of responses of similar age groups, especially the response rate of older adults who responded in Raybould and Lazarow's 2009 report (Figure 5.4.2b).

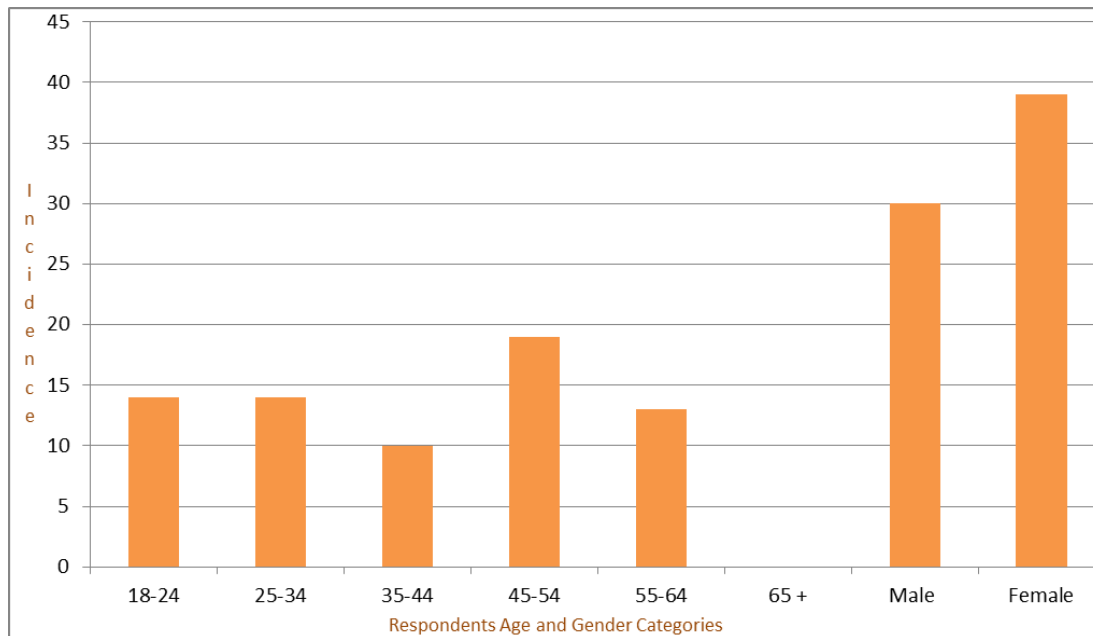


Figure 5.4.2a: Incidence of Age and Gender Categories of Questionnaire Respondents (Author 2012)

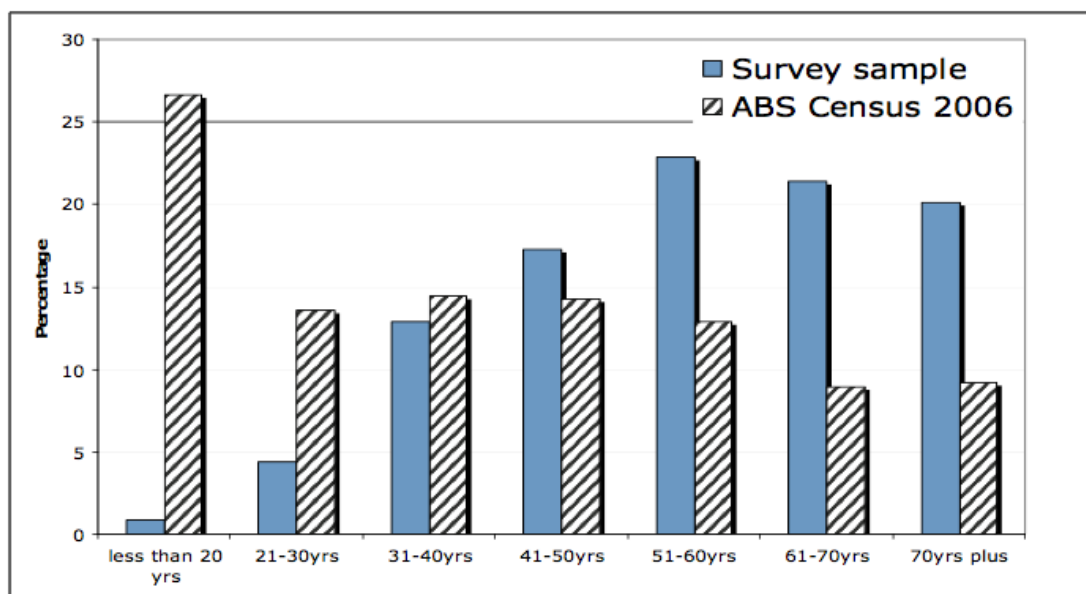


Figure 5.4.2b Age of survey respondents compared with Gold Coast Census data (Raybould and Lazarow 2009)

The difference in response rates to the questionnaire, the purposive sampling mail out (Oh, Draper and Dixon 2009) and mail out (Raybould and Lazarow 2009) is thought to be attributable to the size and scope of the different inquiries and differences in the method of data collection. It is also possible that respondents who are in the beach precinct may perceive similar questions in the surveys and the questionnaire differently to those who complete the survey at home.

Where the Respondents Normally Live

People were asked to indicate where they normally lived, and the responses indicate a similar visitation pattern for the beach precincts as found in other surveys. There is an increase in visitation frequency to the beaches and foreshore which is inversely related to the distance from the place of origin of the respondents (Raybould and Lazarow 2009, Powell and Muldoon 2005). The majority of respondents in the beach precinct are either from a beach suburb or the other suburbs of the Gold Coast. Residents of Brisbane make up another significant group of identified respondents, followed by people from New South Wales and other parts of Queensland (Figure 5.4.2c).

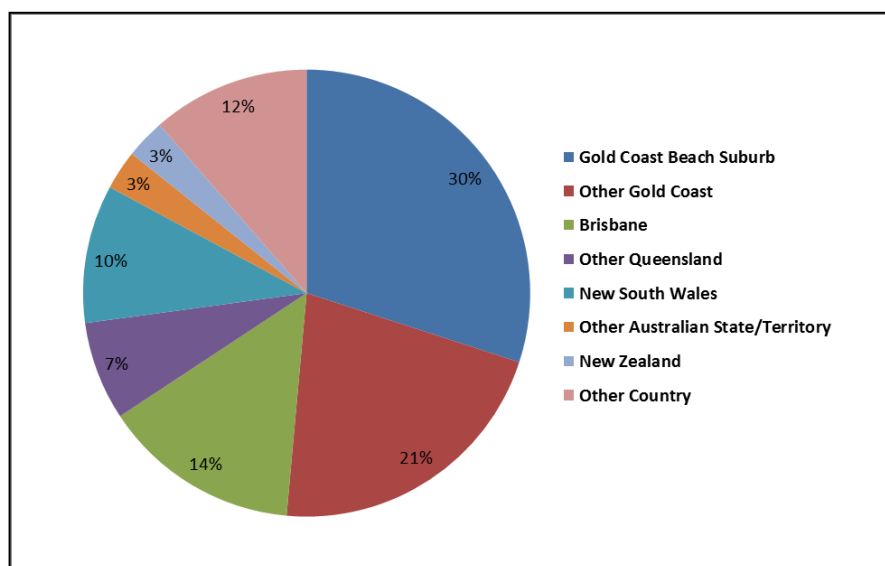


Figure 5.4.2c: Where the Questionnaire Respondents Normally Live (Author 2012)

There were relatively few people from the other states and territories of Australia, other than neighbouring New South Wales. This pattern confirms the importance of local residents in the visitation pattern of beach precincts and contra-indicates the importance of a design and planning regime specifically for the needs and preferences of tourists, should they differ from local residents. There is also an indication in the literature that tourists want an authentic local

experience of tourist destinations where they can experience the lifestyle of the local population (Hayllar, Griffin and Edwards 2008).

The Preferred Beach Precinct Destinations of the Gold Coast

Respondents of the questionnaires were asked to name the beach precinct on the Gold Coast they most preferred. Burleigh Heads was the most cited, followed by Broadbeach and Tallebudgera (Figure 5.4.2d).

This pattern of beach destination preference was similar to the findings of Raybould and Lazarow's 2009 report where Burleigh Heads (820) was the most visited beach for survey respondents, followed by The Spit (527), Main Beach (484), Currumbin (465) and Broadbeach (456).

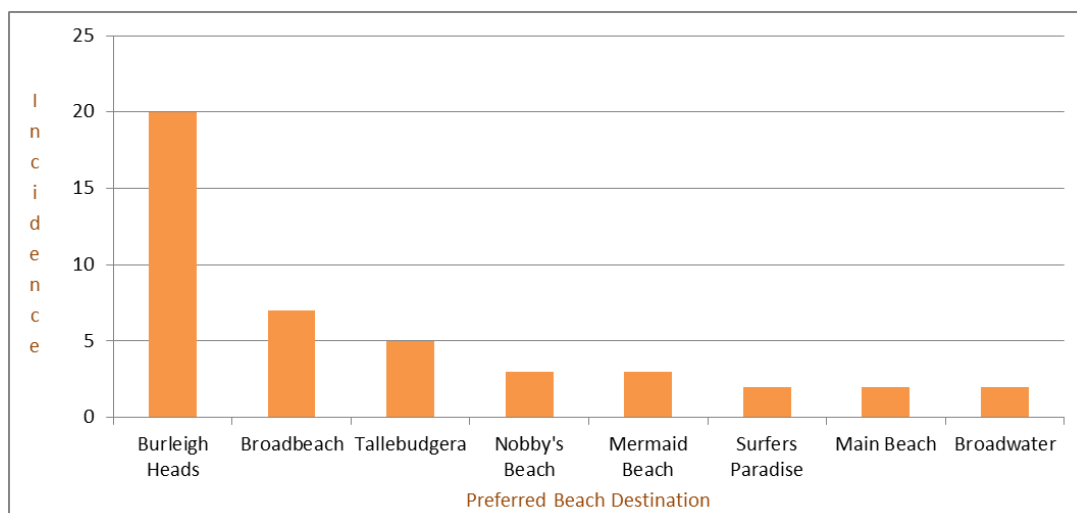


Figure 5.4.2d: Respondents Preferred Beach Precinct Destinations on the Gold Coast (Author 2012)

A report by GCCC for the average daily beach use of the most popular Gold Coast beaches during 2002, reported Surfers Paradise as having the largest number of daily uses (3179) followed by Burleigh Heads (1752) (Wake *et al.* 2008). This may reflect the role of Surfers Paradise as a tourist destination and Burleigh Heads as a more local destination.

Burleigh Heads is also reported in the media as a favourite beach destination on the Gold Coast (Experience OZ 2013, tripadvisor 2013). The questionnaire responses are similar to the other surveys consulted in this chapter. This suggests that the questionnaire responses have a degree of general validity for the purposes of this inquiry.

Respondent Preference for the Frequency and Duration of Beach Precinct Visits

Questionnaire respondents were also asked to indicate their preference for frequency and duration of visits to the beach precincts. The respondents highest incidence of preferences for frequency were for ‘most days’, ‘once a week’ and ‘rarely’, followed by ‘monthly’ and ‘every day’ (Figure 5.4.2e).

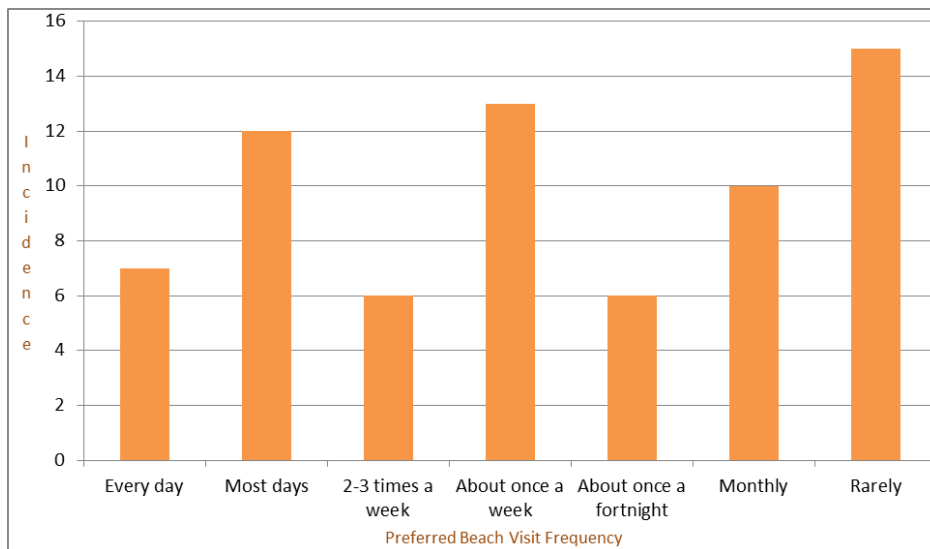


Figure 5.4.2e: Respondent Preference for Beach Visitation Frequency (Author 2012)

The responses for preference of beach visit duration indicate that people tend towards stays of between one and four hours in the beach precinct (Figure 5.4.2f). Although caution should be exercised in considering the data without supporting evidence, these responses do appear to be intuitively correct.

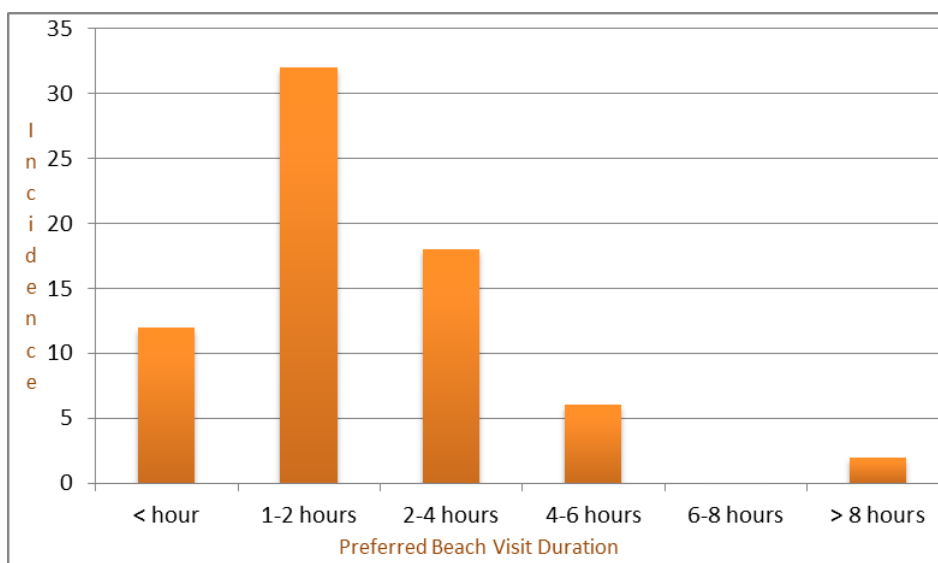


Figure 5.4.2f: Respondent Preference for Beach Visitation Duration (Author 2012)

Raybould and Lazarow (2009 p21) also estimated the way local residents visit beaches in relation to the distance they live from the beach. Their data allows for a propositional inference to be considered that those who visit 'most days' live in the local beach suburb and those who visit 'once a week' live around 10km from the beach. Those who visit less than weekly live on the fringes of the city or in the local region of South East Queensland and Northern New South Wales. It would also be reasonable to assume that those who live closest will also tend to visit the precinct for shorter periods than visitors from inland suburbs.

A significant condition on this proposition would be that visitors have access to a car and convenient public transport access, as Raybould and Lazarow (2009) also noted that less than 1 per cent of their survey respondents used public transport to get to the beach.

Reported Surf Life Saving Club Membership of Respondents

People were asked if they were active or social members of a SLSC. The response indicated 9 per cent of respondents were members of a Surf Lifesaving Club, 14 per cent were social members, and 77 per cent were not members of a Surf Lifesaving Club. These figures are largely in line with the responses to Raybould and Lazarow's (2009) Gold Coast resident survey which reported just fewer than sixteen per cent of respondents as members of SLSCs. The higher response rate from questionnaire respondents may be associated with the proximity of the questionnaire collection to the SLSC buildings.

However, with total active membership of SLSA being around 165,000 (Tourism Research Australia 2013) the frequency of club members in the beach precincts responding to the questionnaire and Raybould and Lazarow's (2009) survey indicates a disproportionate use of beach precincts by SLSC members and a strong affiliation of SLSC members with beach precinct environs.

From the responses given it is not clear if there is any inference that can be taken from the incidence of active and social members in the beach precincts. That there are more social members is probably reflective of the different membership categories in the organisation.

However, the significant number of people without membership does mean that if they did not qualify by other means such as membership of affiliated clubs, or if they were too young to be admitted to licenced premises, they are not allowed entry to use the toilets, meals and drinks facilities of the club in the precinct (Office of Liquor and Gaming Regulation 2012).

Respondent Preference for Social Groups when Visiting Beach Precincts

Beach precinct respondents were asked to indicate how they were visiting beach precincts to gather some indication of the supportive social structures for beach visitation. Online respondents were given the opportunity to indicate how important being in company was to them, using a Likert scale from 'not important' to 'very important' for their reply.

The responses given indicate that it is 'important to very important' to visit the beach in company for most people with a slight preference to visit as a family or family-friendship group. There were a few people who expressed a preference for visiting alone and another group who preferred to be accompanied by a pet (Figure 5.4.2g).

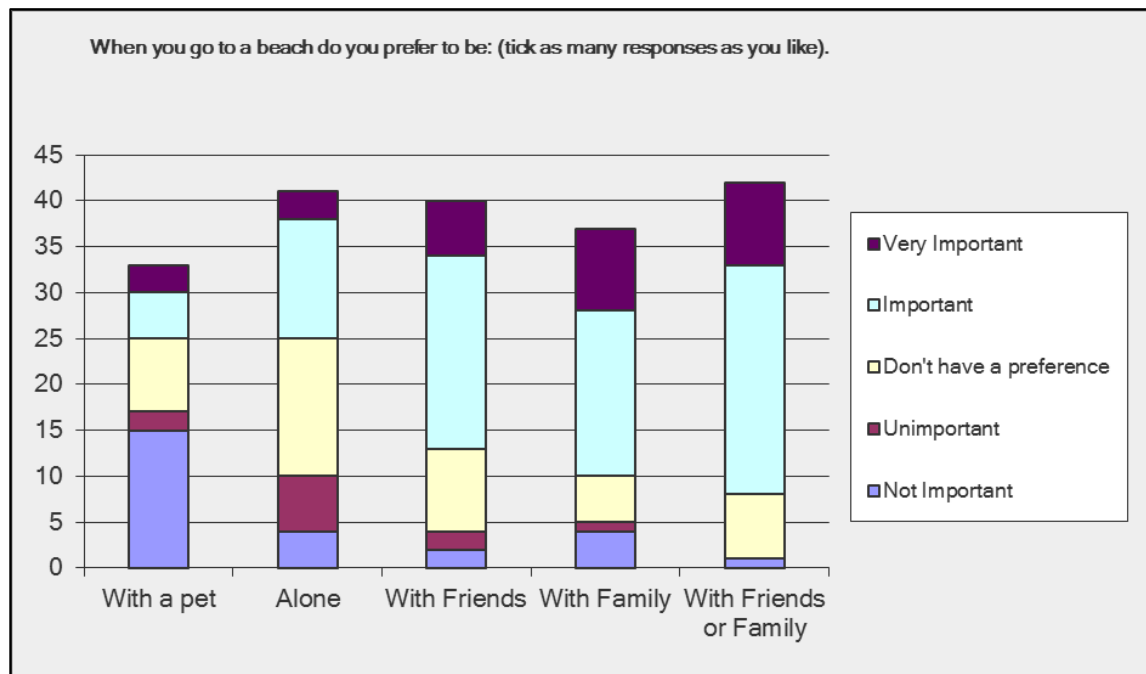


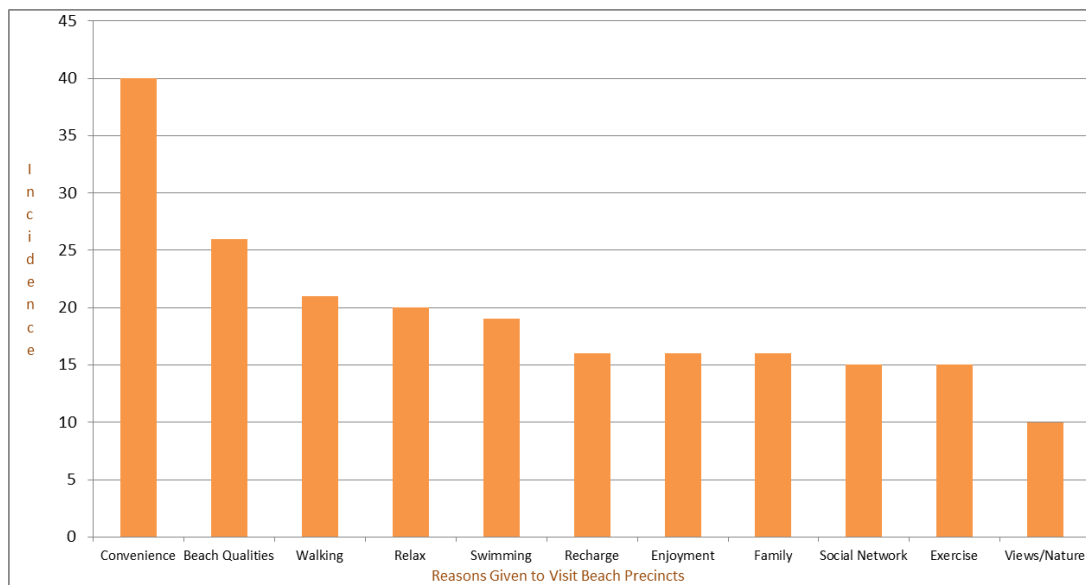
Figure 5.4.2g: Respondents Social Group Preferences When Visiting Beach Precincts (Author 2012)

Reasons Given for Visiting the Preferred Beach Precinct

Beach precinct visitors and internet responders were asked to briefly state why they went to their preferred beach destination. Their responses were analysed using Nvivo 8™ for intent and purpose of visit, and a summary of the analysis is given in figure 5.4.2h.

The most common reason for visiting the preferred beach precinct was given as convenience. A typical response was, 'Close by, convenient, great beach - grew up with local friends there'. Convenience is thought to be composed of aspects that make a place convenient, being the proximity of the beach to the location of home, familiarity with the location, the co-location

of amenities and activities and because they used facilities or social clubs there, or they, family or friends lived or visited the precinct now or in the past.



5.4.2h: *The Highest Frequency Reasons Given to Visit Beach Precincts (Author 2012)*

The ‘beach qualities’ to which people referred are the attributes of the beach precinct itself - the water and wave conditions and a preference for clear water, safe swimming, or good surf waves, the type and quality of the sand. Also included is a preference for an experience of place such as a fun, attractive or uncrowded place allowing proximity to nature.

‘Walking’ was another significant expressed reason for going to the respondent’s favoured beach. People mentioned their selected routes and destinations and the experiences they expected from the walk, such as this reply in reference to Burleigh Heads: ‘You can walk straight on the beach or walk along and enjoy the views. I also like watching the surfers at the point and walking through the National Park and everything you want is in walking distance’.

This illustrates that the respondent prefers Burleigh Heads because they can respond to the beach precinct with a variety of walks, depending on the local conditions they find when they visit, and that they have a choice of walks and related experiences because of the attributes that the beach precinct possesses. This viewpoint of Burleigh Heads is also expressed by the author of a recent best beach survey (Experience Oz 2013).

Walking is seen by respondents as a social activity with family and friends, understood by this respondent’s reply: ‘For walking, with my daughter and to see the sunset’. The relationship of walking to the beach qualities is illustrated by the response: ‘It is close, the walks are attractive and spectacular, and it is well kept, well provisioned and beautiful’.

Relaxing is seen by respondents as an activity in combination with other activities and in its own right as this response indicates: 'To relax, recharge, clear the head and to enjoy the weather, swim, relax'. The other reasons that people gave for their beach destination preference can be grouped into three types of responses: place, personal values and activities.

The place values (or beach qualities) which appear to influence peoples' preferences for beach precinct destination include the views available in the precinct, the amenities, the friendliness of the precinct to children and dogs, the adjacency and presence of nature, clean and well managed public infrastructure and easy parking.

In terms of personal values, respondents go to the preferred beach precincts for personal and social enjoyment because they are attractive, quiet, provide stress relief, allow people to recharge or refresh their personal batteries and possess an emotional, familial or historical connection. They are perceived as familiar and safe to be in.

The activities that people mentioned in their preference for a particular beach precinct are predominantly walking but include safe swimming, general exercise, sunbathing, and surfing, walking the dog and watching other people. There was no mention of cycling or using the beach gym equipment. The relative importance of particular activities, amenities and facilities from the respondents is similar to those expressed by Raybould and Lazarow's 2009 survey participants.

There are differences in the relative importance of activities between the questionnaire responses and those of Raybould and Lazarow's 2009 survey, such as snorkelling and fishing, but the preference to be outdoors, socialise with family and friends, walk on the beach, relax and unwind are remarkably similar. The differences between the questionnaire and survey responses are thought to arise from the focus and scope of the questions in the 2009 survey.

5.4.3 Respondent Preferences for Activities and Facilities

People were also asked to list all the purposes of their beach visit on the intercept survey and their motivation for visiting beaches on the internet survey. They were given the option to select as many reasons as they wished from a range of 28 options as well as a space to record their own reason if desired.

The responses confirmed that the passive and social activities of enjoying views, fresh air, relaxation, watching others, being in nature, having a drink, meeting friends and family were

included in the majority of the intended purposes for most people's beach precinct visits. It would also appear that most people view beach precincts as low intensity places to get away from the stresses of modern living and enjoy the opportunity to socialise, relax and take in the views afforded at the beach and foreshore park (Figure 5.4.3a).

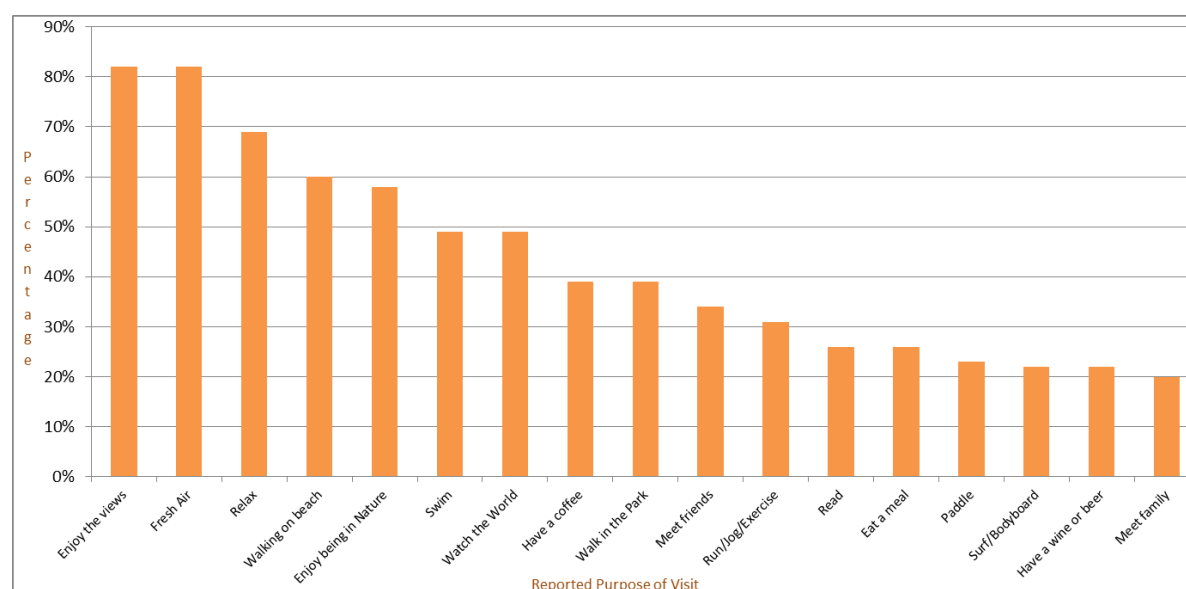


Figure 5.4.3a: Respondents Reported Purposes for Beach Precinct Visitation (Author 2012)

Physical exercise was an intended use of beach precinct users, especially the low intensity activities of walking on the beach and in the park. Swimming, surf or body boarding, running or jogging were the most active of the purposes of beach visitation from the respondents.

Using the children's play area, walking the dog, using the Barbeques, playing a beach game, fishing, cycling, tai chi or yoga, boating, council organised activities and using the gym equipment each received a single response. Many of these less favoured activities are heavily promoted and resourced by the city council (Gold Coast Activity Alliance 2010, Gold Coast City Council 2012a, 2013c) but the responses of the questionnaire and Raybould and Lazarow's 2009 survey indicate that the city policies are not aligned to the most important purposes of visit of the overwhelming majority of beach precinct visitors.

Respondent Preference for New or Favoured Activities

When asked if there were any activities they would like to see more of or introduced to the beach or foreshore parklands, those people who responded to the question on the internet had varied responses. These can be grouped into public or privately sponsored events such as movie nights, arts festivals, pro surfing or surf lifesaving competitions, concerts, and fireworks. There was also support for regular events such as markets, beach volleyball,

fitness groups, and youth activities. There was some mention of skating, jet skiing and the need for more cafes and restaurants.

Responses for Facility Preference to Support Beach Visitation

The respondents to the questionnaire were asked to indicate the importance they attached to a range of facilities using a Likert scale to attribute a numerical rating of 1 being the most important to 5 as the least important to them for a beach visit. In general the response rate was very high for most of facilities listed and no one chose not to complete the question.

The responses were analysed and categorised as: most favoured, favoured and least favoured facilities to support people's preferences for use and activity, along with a category of facilities that support the beach precinct use by some groups.

Most Favoured Facilities for Beach Precincts

The facilities with the highest levels of preferential rating from respondents all appear to represent attributes of personal comfort, safety and convenience that would be supportive of a beach precinct visit (Figure 5.4.3a). The restroom, shade trees, showers and security facilities are all needed to fulfil the fundamental physiological and safety needs of people and align well with Maslow's (1943) hierarchy of needs.

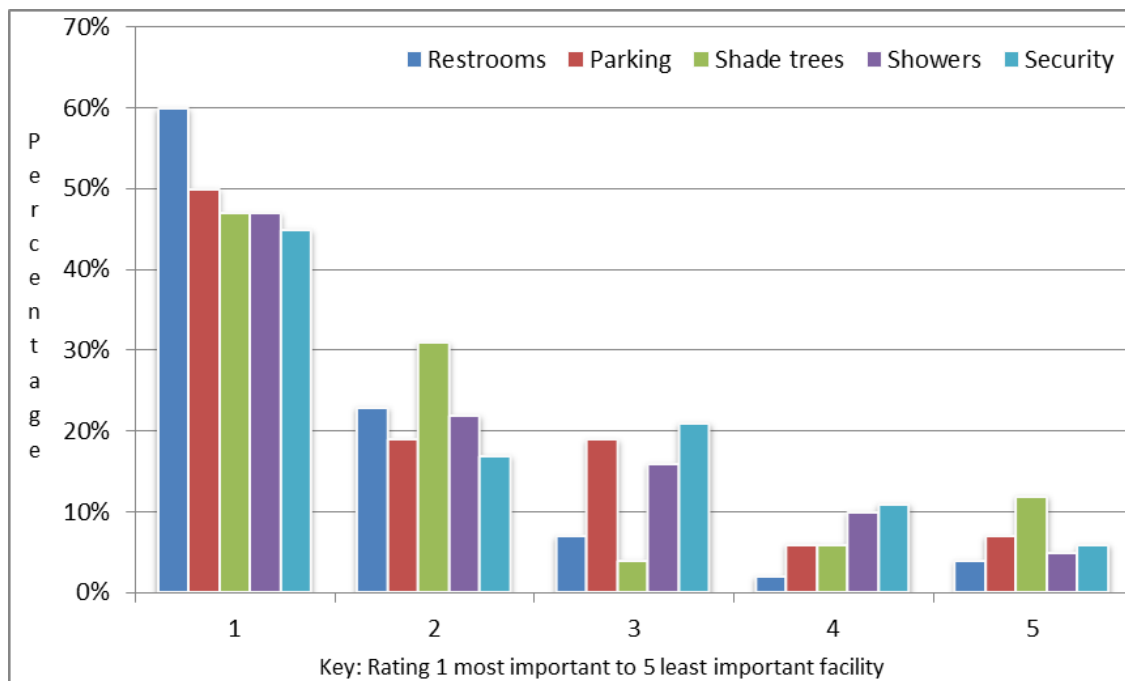


Figure 5.4.3b: Most Highly Rated Facilities Supportive of a Beach Precinct Visit (Author 2012)

The high rating that people give parking is thought to be a significant response and can probably be expected in a city with a very poor public transport network inland of the coastal spine (Gold Coast Primary Care Partnership Council 2009). The rating also indicates that, until such a time as this is not the case, planners and designers need to carefully consider the conflicting needs of people to conveniently access a walkable beach precinct that has poor public transport connections from the inland suburbs of the city.

There are only three beach precincts with a meaningful foreshore park along the coast: Coolangatta, Broadbeach and Burleigh Heads, and these are significant to residents of the inland suburbs (Section 1.5.1). Therefore, the governance and design solutions of the foreshore parks should be oriented to their needs, rather than the needs of beach suburb residents and tourists who can easily access a beach and the preferences of activity project groups in the different levels and departments of government.

Favoured Facilities for Beach Precincts

The next set of facilities were not as overwhelmingly favoured as the previous set, with a wider spread of opinion as to their importance. A significant percentage of respondents reported some facilities such as the SLSC, public transport stop, picnic areas, lighting and public barbeque as unimportant or less important for a beach visit (Figure 5.4.3c). This group of facilities received more favourable ratings than unfavourable ones, but the response is conflicted. Except for lighting, and its associated safety implications, the facilities can be seen as relating to access and social activity groups of facilities.

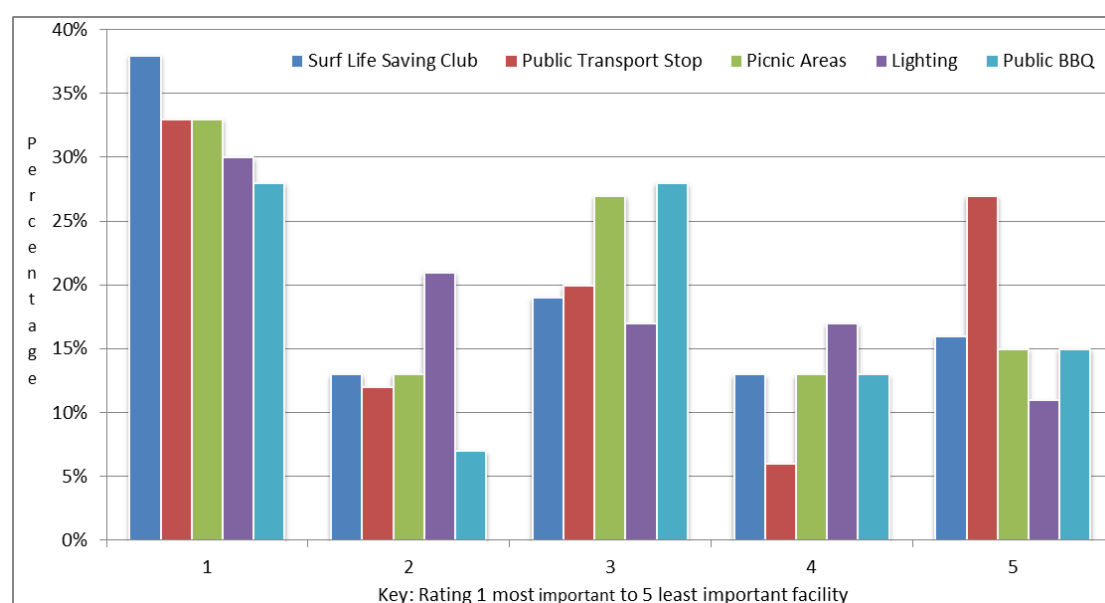


Figure 5.4.3c: Favoured Facilities Supportive of a Beach Precinct Visit (Author 2012)

The questions do not reveal the reasons for the preferential ratings but they imply a liking, indifference or rejection of the importance of the facilities to different individuals. The response to public barbeques, for instance, appears on balance to indicate that some people favour them but that the majority do not. The reasons for this are unclear, but the importance of providing barbeques at public expense is questioned by this response, especially as energy costs continue to rise. There have also been some anecdotal indications that some people use them as a substitute for home cooking.

Least Highly Rated Facilities for Beach Precinct Visits

This group of facilities can be seen as an optional facility group that meets the needs of specific groups, with very few respondents viewing them as important for a beach visit (Figure 5.4.3d). They were also the facilities that the fewest respondents chose to rate. Those who did, appear to view them with indifference or as not very important.

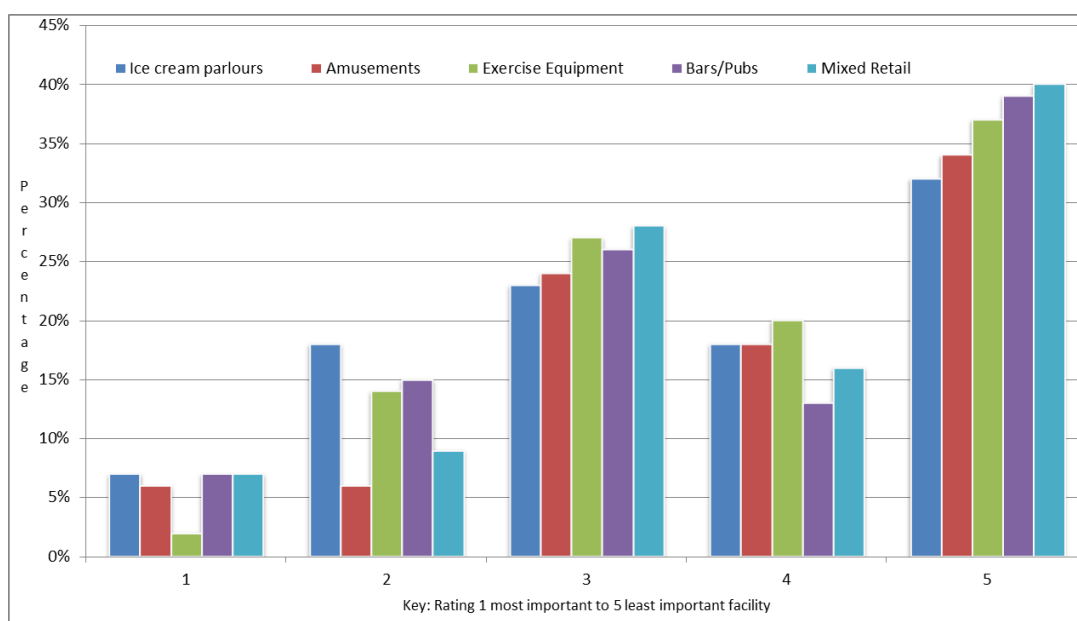


Figure 5.4.3d: The Least Favoured Facilities Supportive of a Beach Precinct Visit (Author 2012)

This may also be a reflection of people learning to associate some places with some activities and other places for others, or it may be the way that people treat the different beach precincts as places to get specific types of experience. There is also a sense that, overall; the ratings reflect a preference for facilities to meet physiological and psychological needs first.

The respondents may also have different interpretations or understandings of terms like ‘mixed retail’ that have specific meanings in a professional context but could be confusing to someone unfamiliar with the term. This indicates a need to inquire carefully into people’s

associated meanings of place and the elements that contribute to those meanings which may not lend themselves to quantitative methods of inquiry.

Facilities that Support Beach Visitation for Some Groups

The next group of facilities can be seen as facilities that support activities and extended stays in the beach precinct for some groups, but not by all respondents. For example, seating, cafés and restaurants can be seen as optional facilities that are dependent on the purpose of the visit for most respondents. It is interesting that open and covered seating had more support than cafes and restaurants, but that the support of latter facilities is probably important for some visitors (Figure 5.4.3e).

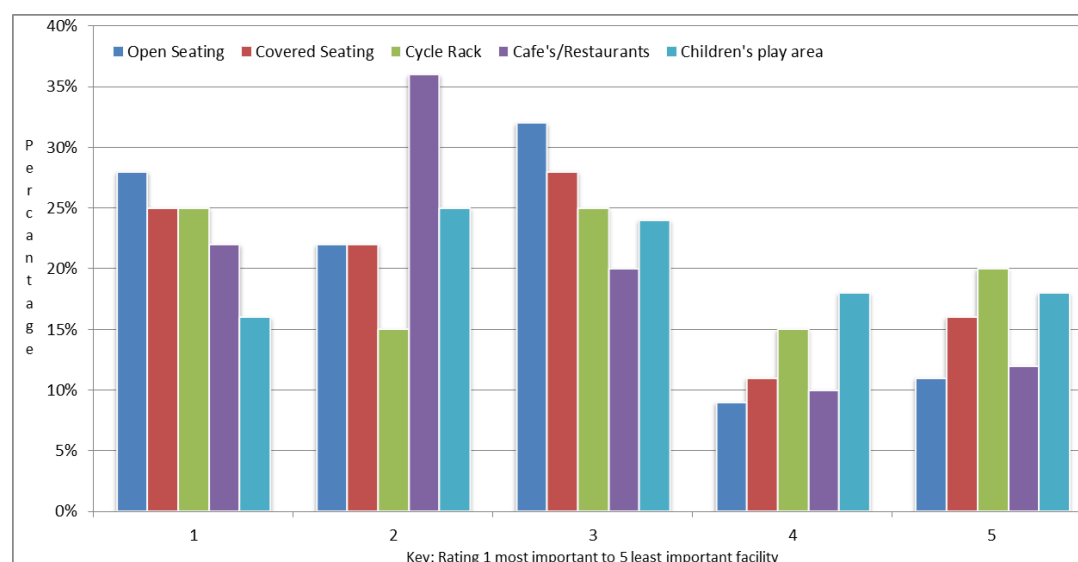


Figure 5.4.3e: The Facilities that are Supportive for Some Groups for a Beach Precinct Visit (Author 2012)

The cycle rack and children's play areas are facilities that specific user groups can be expected to favour and for others to be indifferent towards. The cycle rack facility had the least number of responses of all facilities and it is not known if this indicates a more widely held lack of support for them. The responses that these facilities did receive may also be responding to how people see themselves using beach precincts, rather than how they are seen to be using them in the field observations.

The facilities that people did not respond to were mixed retail, amusements, bars and pubs, ice cream parlours, surf lifesaving clubs, barbeques, and cycle racks with nearly half of the respondents not rating them. This is interesting, as barbeques, SLS clubs and cycling facilities feature prominently in the discussions of professionals involved in the design, planning and

management of beach precincts (Section 6.4.4) and the council has invested in the provision of many of them (Gold Coast Activity Alliance 2010, Gold Coast City Council 2012a, 2013c)

Restriction, Regulation and Provision of Public Infrastructure in Beach Precincts

This section of the questionnaire was intended to investigate the governance of the beach precincts and the public response to their restrictions and regulation, including the inclusion and exclusion of vehicles, and particular types of users and uses. This was achieved through an inquiry into what existed, what may be intended and what was wanted or preferred, in activities and behaviours in beach precincts.

Parking Fee Tolerance for Beach Precinct Visitation

Questionnaire participants were asked to indicate the most they were willing to pay for parking. Only one respondent skipped the question, which was intended to identify how much people were willing to pay per vehicle, per visit. Unsurprisingly, it would appear that most people would rather pay nothing. The responses received indicate that, of those who are willing to pay, there is a distribution of responses around five dollars, with an apparent limit of ten dollars (Table 5.4.3a).

Table 5.4.3a: Respondent Tolerance Levels for Parking Fee Charges (Author 2012)

What is the most you are willing to pay for parking per vehicle per day at the beach?	
Suggested Response Amount	Percentage Response
Nothing	55%
\$1	3%
\$2	12%
\$5	20%
\$10	10%
\$20	None

The lack of willingness to pay for parking may have a range of reasons that were not uncovered in this inquiry. The City of the Gold Coast has had an interesting history with parking fees and they are certainly a part of the narrative of conflict and control in the beach precincts on the Gold Coast and elsewhere (section 6.5).

The association of parking and beach precinct parking fees led to the introduction of the iconic, bikini-clad Gold Coast Meter Maids. The meter maids can be seen as both a part of the tourist industry and a cultural narrative of access to the beach precinct, as they originally

topped up visitors parking meters in Surfers Paradise to counter the negativity surrounding their installation in 1965 (Surfers Paradise Metermaids 2013).

The local council has also signalled its intention to raise parking fees in the Burleigh Heads beach precinct (Killoran 2011a). Parking also plays a part in the preferences of beachfront residents in some beach precincts who have sought and been successful in restricting both parking opportunity and traffic access, by the regulations that apply to the roads parallel and connecting to the beach in their precincts (Bedo 2010b).

The tolerance of parking fees was found by Oh, Draper and Dixon (2009), in their multi-attribute preference survey, to be associated with four other important attributes of beach precinct development: the number of beach access points, crowding and noise levels, the level of commercial development along the beachfront, and the rules restrictions and regulations governing the beach precinct. These findings are relevant to this thesis as the patterns of development found the beach resort cities of South Carolina, USA, are similar to those found in the Gold Coast and the important attributes of a beach precinct may also be similar.

Oh, Draper and Dixon (2009) found that a five dollar a day parking fee, associated with restroom facilities and extra beach access, encouraged visitation of beach precincts with those attributes if the precinct also had the attributes of moderate development and medium restrictions. There was however, a negative coefficient of parking fees and visitation of the beach precinct as fees rose.

The other findings of Oh, Draper and Dixon (2009) of interest to this study are that younger and male tourists were more likely to participate in beach precinct visits than older and female tourists. They also found that higher levels of crowding and noise deter beach precinct visitation. Tourists prefer some restrictions on activities and behaviours, but they do not like high visibility rules and regulations. They also prefer moderate levels of commercial development along the beach.

Respondent Preference for Specific Beach Precinct Activities Restrictions

Respondents were asked to indicate their preference for or against restrictions on beach precinct activities, both on the beach and in the foreshore parklands. Respondents were invited to select as many restrictions as they wanted. All the options given were for legal activities. Illegal activities such as graffiti, drug dealing and use were not part of the intent of

the inquiry. One respondent did mention drugs in the option to enter other desirable restrictions. The first option on the online questionnaire was for no restrictions on activities and around eighteen per cent of respondents selected this option.

The most support for restriction of activities was found for alcohol, dogs (irrespective of whether they were on or off leash), vehicles and skateboards (Figure 5.4.3f). Restrictions on all these activities are already in effect in Queensland, with drinking in public places including beaches attracting a \$110 fine, except in ‘wet areas’ that can be designated for alcohol consumption as ongoing, periodic or for specific events like weddings in the park (Queensland Government Office of Liquor and Gaming Regulation 2012).

Dogs are controlled by local councils in Queensland and must be licenced and under control in public, with the owner responsible for disposing of faeces hygienically. Dogs are conditionally allowed in designated areas on the beaches and foreshore parks, although in some places they are prohibited. Dogs not under the control of an owner can be seized and impounded by council officers (Gold Coast City Council 1988). Despite these regulations, dogs can be found in beach precincts off-leash and in prohibited areas which may explain the high incidence of support for restrictions on dogs in beach precincts. Conversely, the results could also indicate that a sizeable minority of respondents are tolerant of dogs in the precinct.

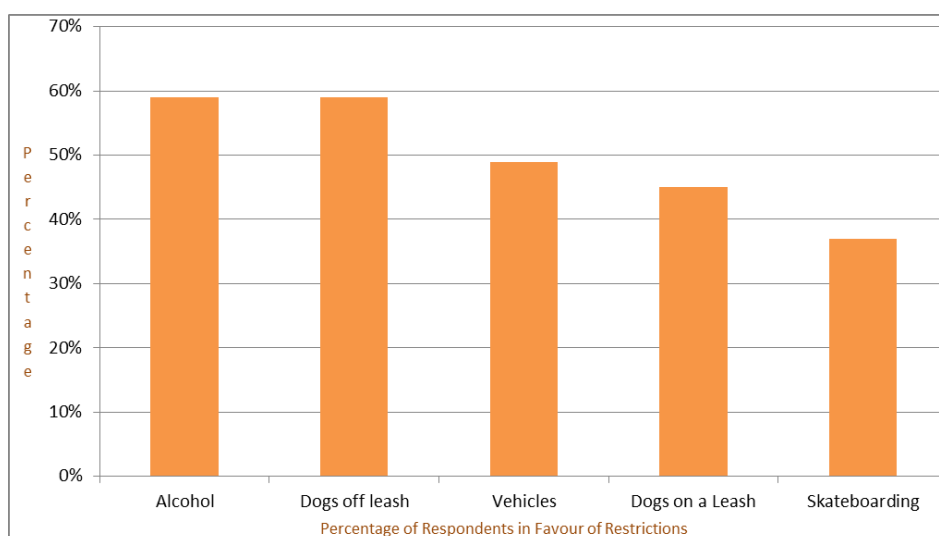


Figure 5.4.3f: Highest Response Preferences for Restricting Activities in Beach Precincts

Skateboards are considered ‘wheeled recreational vehicles’ under the Transport Operations (Road Use Management Act 1995) and cannot be ridden where there are signs prohibiting their use (Queensland Government 2012). The researcher did not observe any problems with

skateboarders in the beach precinct, finding they were likely to dismount and carry their skateboards on paths with heavy pedestrian traffic. A report produced by Griffith University and the Gold Coast City Council tends to support the field observations of this research that, although skateboarders are often viewed in a stereotypically, negative light, they are mostly respectful of each other, of their environment and rules (Bradely and Stinson 2008).

The responses in favour of restrictions on other activities in beach precincts also indicated some support for restrictions on street vendors, music, buskers, and cycling (Figure 5.4.3g). There were no street vendors or buskers recorded during the observations. Roadside vendors are controlled by local law (Gold Coast City Council 2008) and buskers are regulated by the Council and permitted in Surfers Paradise and Broadbeach at particular sites in the pedestrian mall (City of the Gold Coast 2013). A few respondents also recorded some support for restrictions on fishing, playing informal games, surfing or body-boarding.

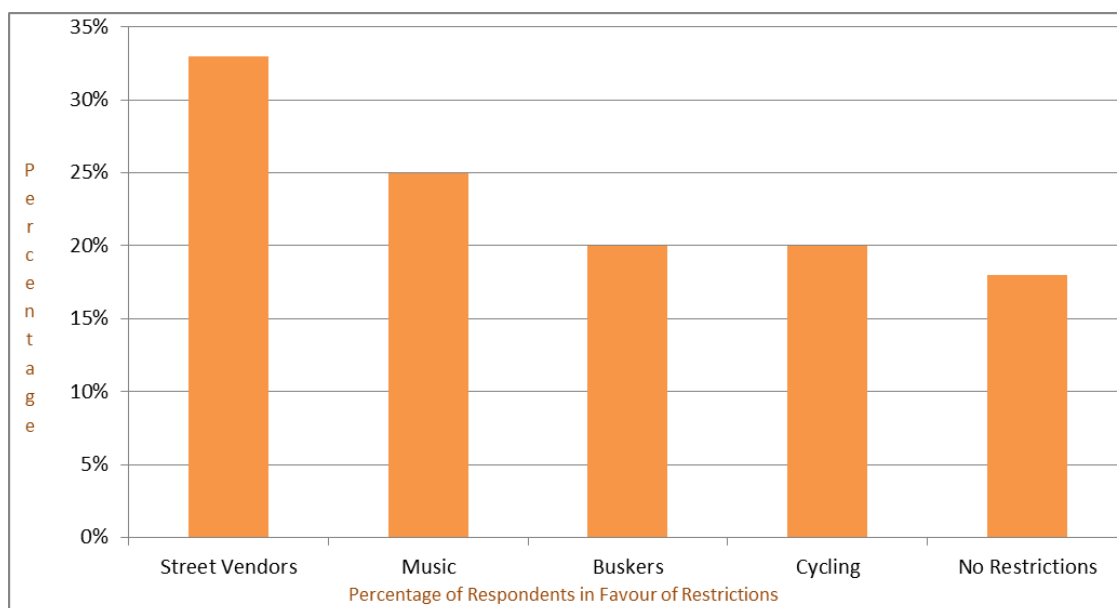


Figure 5.4.3g: Other Respondent Preferences for Restricting Activities in Beach Precincts (Author 2012)

Respondent Preferences for the Promotion of Beach Precinct Activities

Over a third of respondents skipped this question in a questionnaire that otherwise had a very high completion rate of the questions asked. There may be many reasons for this: they did not considered any activities to be missing from the beach precinct or they had not had enough time or personal experience to cause them to reflect on the question, prior to it being posed. There were indeed a significant number of respondents that thought the beach precinct should

be left as it was. The incidence of suggestions was analysed from the responses and summarised using Nvivo 9™ software and the results are shown in the following table 5.4.3b.

The suggested activities can be grouped as sporting facility suggestions, such as beach volleyball and skating that might need permanent facilities, or jet skiing, Surf Life Saving and Pro Surfing Competitions that would require setting aside separate spaces for that activity.

There is also a group of managed-event space suggestions for events that would occur periodically such as concerts, family and youth activities, fireworks, fitness groups, movie nights, markets, music festivals, and public art events. The final group can be seen as visitor service and facility suggestions such as beach massage, vendors, cafes and restaurants.

All these suggestions would be likely to involve some form of governance and sponsorship framework in their delivery or activation in the beach precinct. There were few surprises in suggestions to include a request to drink alcohol and light bonfires in the parks and on beaches, which are currently illegal activities in Queensland.

Table 5.4.3b: Respondent Suggestions for the Promotion of Beach Precinct Activities (Author 2012)

Question	Response	Incidence of Reference
Q 18. Are there any activities you would like to see introduced for the beach and foreshore parklands? n = 70.	Leave it alone	6
	Beach Volleyball, Organised Events	4
	Family Activities, Fitness Groups	3
	Gardens, Markets, Pro Surfing Competitions	2
	Beach Massage, Bonfires, Cafes and Restaurants, Concerts, Drinking Alcohol, Enclosed Dog Areas, Fireworks, Jet Skiing, Movie Nights, Music Festivals, Public Art, Skating, Street Vendors, Surf Life Saving Competitions, Separate Bike Paths, Surfing, Swell Festival, Vendors, Youth Activities	1

The city council does deliver or manage programs that are explicitly located in particular beach precincts, including the Active and Healthy program (Queensland Health 2010) which, although intended as a whole of city response, is largely located in the beach precincts (Bajracharya and Khan 2012). Beach vendors and other activities have also been suggested

for the beach precincts, but require a permit to operate. In the past this has included ‘Al the Suntan Man’ who operated informally and by custom on Surfers Paradise beach (Hicks 2011).

Respondent Preferences for the Provision of Beach Precinct Facilities

The response rate to this question was also comparatively low, despite the topic of amenity and facility having been primed in the preceding questions. The question included suggested facilities that may be appropriate but not present in any of the beach precincts that form the subject of the research. A number of respondents thought the precincts did not need any new facilities, coinciding with the ‘leave it alone’ response given to the inquiry into beach precinct activities (Table 5.4.3c).

The response suggests a degree of satisfaction with the current activities and facilities in the existing beach precincts. The satisfaction expressed for the status quo is not, however, a majority response. The overlap of what is a facility and what is an activity is also evident in the responses. This indicates that the respondents perceive a close connection between activity and facility. For example, gardens and vendors may be seen by some as a facility and by others as an activity.

Table 5.4.3c: Respondent Preferences for the Provision of Beach Precinct Facilities (Author 2012)

Question	Response	Incidence of Reference
Are there any facilities such as piers, jetties, children's water activity areas, gardens, amusements, you would like to see introduced into this beach precinct? If so what would they be?	Waterparks	12
	Children's play areas	9
	Piers and jetties	8
	None	7
	Gardens, Seating, Trees, Vendors	3
	Cafes and restaurants, Oceanway or beachfront path, Public Toilets, Quiet or Restful Places	2
	All the example facilities, Barbeques, Bench sets, Bubblers, Changing facilities, Busy places, Dune protection, Open space, Paid lifesavers, Picnic facilities, Rock swimming pool, Public transport stop, Showers	1
n = 70.		

The suggestion of children's water activity areas in the question appears to have been reinterpreted by a significant number of respondents and returned in the responses as

waterparks and children's play areas. It is suspected that the responses given suggest that all ages would like a waterpark similar to the type found in the 'Streets Beach' facility in South Bank, Brisbane. However, more research is needed to reveal preferences for play facilities for children and adults, and the levels of concern of carers of children regarding various ocean beach hazards, such as dangerous swimming conditions and marine animals.

The destination and activity facilities also include gardens, piers and jetties, quiet and restful places, and rock swimming pools, one of which had previously existed in Burleigh Heads (Environmental Resources Management 2010). These destination and activity facilities allow people to go to a landmark destination in the precinct to take part in activities that can only be done at that destination, such as fishing or launching a boat from a jetty, enjoying views from a pier or smelling the flowers in a garden.

The responses also indicate that ocean piers and jetties and ornamental gardens could enhance the existing beach precincts. The increased public space created by piers and jetties would reduce overcrowding and meet a more diverse range of users' needs, such as fishing, boating and promenading, as well as the use of facilities for activities often associated with piers.

The less frequent responses concern those facilities and infrastructure that are supportive of human needs and activities whilst in the precinct, such as toilets, seating, beachfront paths, barbeques, bubblers, changing facilities, picnic facilities, public transport stops, and showers. These facilities are provided in some of the beach precincts studied, but not in others.

5.4.4 Respondent Preferences for Beach Precinct Development

In response to an inquiry into their preferred beachfront development which allowed for multiple selections of types of development, there was a clear and significant preference expressed for foreshore parks, boardwalks and esplanades (Figure 5.4.4). There was very little support for resorts, private homes or apartments as a form of beachfront development.

The preference for development that enables public access to the beach is convergent with other public surveys indicating a preference for beachfront development that freely allows public access to the beach from the beach precinct. Support for changing the law to prevent beachfronts being developed was at 84% in the internet responses.

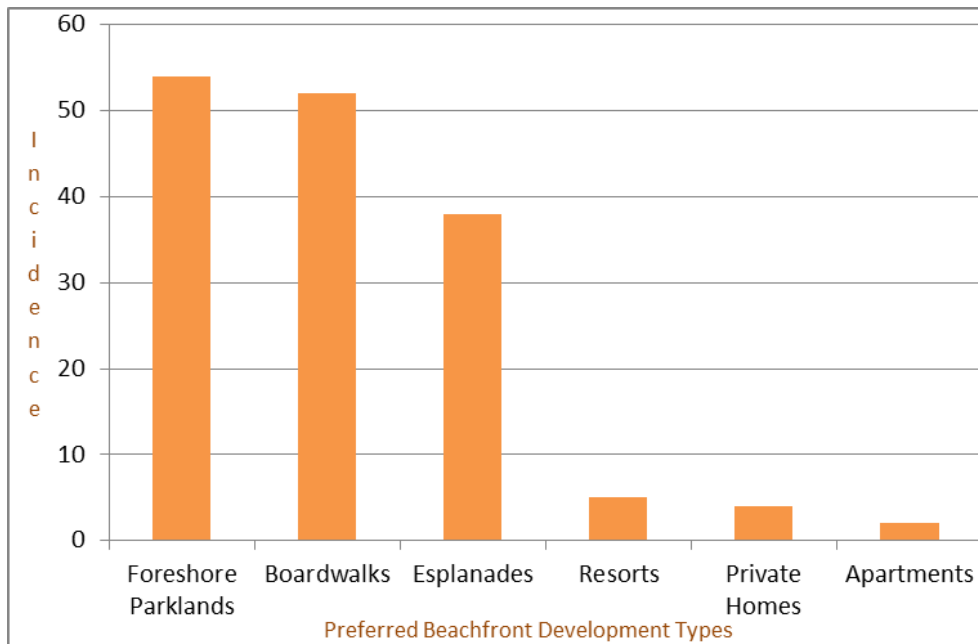


Figure 5.4.4: Respondent Preferences for Types of Beachfront Development (Author 2012)

The degree of preference expressed in the questionnaire is similar to the eighty two per cent preference expressed in the Jersey Surfriders poll supporting public access to beaches where public funds are spent to restore and protect them (Hester 2010), the seventy six per cent who supported the amendment to the Texas constitution vote on beach access (Legislative Reference Library of Texas 2009) and the degree of importance attached to parks and foreshore behind the beach by Gold Coast survey respondents (Raybould and Lazarow 2009).

Reasons Given for Beachfront Development Preferences

Respondents were given a short answer response option to elaborate their reasons for their expressed beach front development preferences. These responses were analysed using Nvivo8™ software for the topics and themes in the responses. The reasons given for a development preference were in three broad theme areas. The most important themes, in terms of incidence of preference, were reasons associated with the public benefits and democratic expression of public access rights and the priority of the public claim for enjoyment of the natural environment (Table 5.4.4a).

None of the responses coded to personal preference for beachfront development supported private property owners' rights to deny the public access to the beachfront transitional corridor. The following respondent comment includes a description of the public benefits of an egalitarian nature for public enjoyment, with a specific censure of private ownership of the beachfront: 'Everyone can enjoy the atmosphere and the visual amenity is far greater than

that offered by private developments, either commercial or residential. It allows for a greater use by all people and therefore fosters community spirit even for tourists or casual visitors’.

Table 5.4.4a: Most Common Respondents Reasons for Beachfront Development Preference (Author 2012)

Topic or Theme	Incidence of Reference
For Personal Preferences	30
Public Access	20
Meeting Human Needs and Public Priority	16
Public Comfort and Enjoyment	14
Benefits	13
Democratic	12
Natural environment	12
Anti-development	8
n=70	

The responses also articulated a degree of special meaning associated with the beach and foreshore as communal, spiritual and attached to a connection to nature, as this response indicates: ‘More people can access the beauty of the beach. No shadows or high rise. Need it to be a spiritual area for everyone to connect with. Also allows fitness activities which our population really needs’.

This special meaning of the beach extends to a general claim of public priority to its ownership, governance and utilisation with an assertion of the rights of the public negating the concentration of economic benefit of individual ownership, and an acceptance of the obligation of the public to maintain and manage the foreshore for people and the natural environment. The comments that support this view include: ‘Beaches should be a public asset; they are less intrusive and enhance the natural environment multi-use; comfortable and easy to maintain; more flexibility with activities, less impact on nature; opposed to private beaches’.

Respondents also commented on the nature of adjacent development as preferably low level, unobtrusive and enhancing the experience of visiting the beach. Foreshore parklands were generally favoured, as they provided high levels of access. Boardwalks were seen as having less impact on the natural environment and allowing people good levels of public access to the beach. Esplanades were perceived as supportive of recreational and social activities and positive for public access to the beach. Private types of development were seen as intrusive and isolating, less protective of the environment, anti-democratic, elitist, exclusionary, and offering no benefit to the public.

5.4.5 Some Meanings of Beach Precincts to Respondents

The final short response questions asked respondents to express what being beside the seaside meant to them. The term seaside was used, as it has a meaning that spans the beach precinct from the natural to the built environment and has a less specific spatial sense. The term beach precinct was not used as it was considered to be one that might be misunderstood or misinterpreted by the public. The responses were analysed for the meanings that were attributed to the seaside and by implication the beach precinct.

The responses can be grouped as personal, social, restorational, environmental or recreational activity value responses. The personal responses were the most prevalent and this can be expected to be the case when the question directed the respondent to a personal response.

The clusters of personal response comments were seen as articulating the mental and physical needs of the respondent. The prominent responses refer to the mental health values of relaxation, peacefulness, happiness, wellbeing, and refreshment centred on an interpretation of the seaside as a quiet place to recover from the stresses of daily life (Table 5.4.4b).

Table 5.4.4b: Highest Incidence of Meanings Respondents Attribute to the Seaside (Author 2012)

Meaning Attributed to the Beach	Incidence of Reference
Relaxing	22
Natural Environment	18
Connection	13
Mental Health	11
Happiness or enjoyment	10
Socialising	9
Exercise	6
Lifestyle	6
Peaceful	6
Wellbeing	6
n = 70	

The highest incidence response groups all appear to indicate that relaxing in a happy stress free natural environment is a very high priority for people, when thinking about beach precincts. The design of precincts would need to similarly prioritise the spatial arrangement of facilities and amenities such as seating, views, and supportive infrastructure to allow people to enjoy their visit without compromising these priority preferences.

The expressed priority preferences also have implications for the management of beach precincts as places where people are seeking to activate the personal benefits associated and valued in beach precincts. Compromising the core values of the beach precinct to actuate the desires of particular lobby groups may make the beach precinct less able to meet the wider public's needs of the precinct, as indicated in section 5.4.3.

The association of physical activities with beach precincts emphasises the personal and social benefits of beach precinct visitation. Although they were a lower incidence of preference than the higher incidence group, they are probably associated with activities that people see as supporting and activating those meanings of the seaside (Table 5.4.4c). For example, a surfer would probably perceive the experience of surfing as activating their connection to the freedom found in the natural environment that made them happy and contributed to their sense of wellbeing.

The challenge for governance is that the permission for activities that are beneficial for some are not restricting the opportunity to relax and peacefully connect to nature for the majority of beach precinct visitors. For a destination with such high restorative values, this requires careful design, governance and regulation of some activities which may conflict with the very high priority preferences and needs of the public as a whole.

Table 5.4.4c: Other Meanings Attributed to the Seaside (Author 2012)

Meaning Attributed to the Beach	Incidence of Reference
Health and Refreshment	5
Escape, Freedom, Swimming, Views	4
Activity, Familial, Spiritual, Sunbathing	3
Different, Open Horizons, Open Space, Recreation, Surfing	2
Holidays, No restrictions, Walking	1
n = 70	

5.5 Concluding the Inquiry into the Purposive use of Place

This chapter has explored the patterns of activities and behaviours associated with physical features, facilities and amenities found within social distance and visual proximity of the transitional locations in the different beach precincts. It has also examined the relationships and connections between the natural and built elements, including the public and commercial facilities, observable activity and uses.

From the field observations, important relationships have emerged between activities and the functions of places and their associated meanings for purposive use by precinct visitors. The relative importance of different locations in the beach precincts as transitional places with patterns of associative activity and implied values was established by the frequency and diversity of visitation and purposive use.

The prominence of particular demographic groups in the public realm and the absence of other groups were also revealed. Further research is necessary to establish the reasons for the disparity of age and gender distribution in beach precincts when compared to the Australian population.

The public inquiry by questionnaire and surveys also surveyed the opinions, intent and preferences for purposive use of beach precincts and further examined the values of beach precincts and locations within them to visitors, tourists and residents (Table 5.5a)

Table 5.5a: Summary of Field Observations and Public Inquiry (Author 2013)

Summary of Field Observations	Summary of Public Inquiry
Transitional Locations, Corridors and Routes Revealed key elements of beach precincts as transitional locations, corridors and routes of the public space network. Revealed functions of particular locations as promenade, gateway, commercial, destination, movement, activity and extended stay places.	In combination with Chapters Three and Four the research has establish patterns and relationships of respondents, precincts and locality. This has identified the preferred transitional forms, locations and edges of beach precincts and the governance and design solutions to support egalitarian access and visitation.
Activity Movement and activity other than movement concerned with accessing facilities, amenities and environments by location and precinct. Incidence and clusters of location associated activities and behaviours.	Facility and activity ratings, suggestions for facilities and activities for beach precincts. Preferred types of development to support visitation. Opinions on restrictions of activities and behaviours. The relationship of frequency and duration of beach visits and privileged positions of beach suburb residents, tourists and some activity groups.
Social Preferences for Visitation Visitation rates of individuals, couples and groups. Composition of couples and groups by generation and for implied child caring by location and precinct.	Age and gender of respondents. Expressed ratings and preferences for visitation in social groups. Indications of where beach visitors come from. Indication of club affiliation of beach precinct visitors. The confirmation of the need to design and plan for egalitarian access, especially for identified constituencies of disadvantage.
Identified Values of Place Frequency and intensity of visitation by location and precinct as implied approval for purpose.	Preferred beach destinations, public access to the foreshore transition and types of development suitable to beach precincts. Preferences for restrictions on activities and behaviours. Expressed values associated with the seaside. Dissonance between public and professional valuations of beach precinct facilities and activities.
Identified Limitations of Place Allocation of space for parking. Design of routes as shared paths for pedestrian, cycling, and personal recreational and electric vehicles.	Tolerance of parking fees associated with beach precincts. Low degree of importance of facilities associated with particular activities such as cycling conflicting with the restorative values of a walkable environment.

This section summarises the observed, reported and implied values of beach precincts and the preferences for activity associated with facilities, amenities and locations within them. It

includes the limitations that the current urban design decisions impose on the degree of choice to engage in preferred activities associated with the values of the beach precinct as a seaside destination. In summarising the social preference for visitation as both supportive of, and a component of expressed preferences, the following relationships were observed:

- Demographically adult males are overrepresented in the beach precincts. In association with young adults they dominate movement observations in general and cycling activity in particular. They are also most likely to be observed as individuals than any other demographic group.
- Older males, women and older women in particular are underrepresented in the beach precincts. Older women appear to rely on partners, younger family and friends to socially support visitation and activity.
- Young and adult women are responsible for supporting visitation and other activities by children, although they may be supported by males and older women in this role. Children are more commonly observed engaged in activities other than movement that involve extended stays in a particular place.
- Same generation groups are more commonly observed than intergenerational groups and the most common generational group and observed activity is the adult male and female walking in the precinct. Couples of all kinds are more commonly observed than any other social group, followed by individuals. The larger the group other than couples, the less frequently they are observed. Groups over six people are uncommon.
- Walking has many purposes including walking for individual pleasure, walking and chatting as couples and social groups, walking as movement between places, walking the family dog, pushing prams, walking as exercise and walking to relax.
- Socialising, and restoring mental health by connecting to nature whilst walking is indicated as the dominant and, by far, the most prevalent activity in the beach precinct. Walking along the promenading edge between access form and the beach and ocean is the dominant activity in the beach precincts with a foreshore park. And, adult male and female couples are the dominant participants in these activities.

These findings imply that beach precincts are an active adult male domain and that the beach precincts either specifically suit the needs of adult males or they have been designed to meet their preferences, as suggested by other studies into the issues of urban design, age and gender (Bondi 1998, Jarvis, Kantor and Cloke 2009, Sallis *et al.* 2009).

The clusters and patterns of observed activities associated with the transitional corridors, locations and edges of the different beach precincts are related to the facilities and amenities within social and visual distance. The amenity of visual connection to the restorative views of a seaside place most important along the traverse or promenading path. The best beachfront transitional corridor for this visual connection is found along the traverse pathway in Burleigh Heads, and the worst is found at the intersection of Ventura Road and Hedges Avenue (MBINT2) where there is no sense of being beside the seaside.

There are also patterns of activity and clusters of behaviour associated with facilities, amenities and locations that were also identified from the urban design analysis (section 5.1) and confirmed in the field observations. These include:

- Different forms of movement are associated with particular transitional corridors. Different forms of activity take place off-path at facilities or in accessing spaces and amenities. Some activities can only take place in specific locations such as in a foreshore park, on the beach or in the water.
- Physical, visual and symbolic barriers are produced by walls, fences, gates, the lack of shade, shelter and seating along paths and edges of transitional locations to support walking; the absence of supportive public or commercial infrastructure, lighting, enclosed and disconnected spaces, dunal plantings, SLSC buildings and parking that divide public space; busy roads and traffic controlled crossings, one way road systems, shared pathway policy and design, the absence of convenient frequent public transport;
- The physical, visual and symbolic barriers deter people from visiting, or staying in a place, accessing facilities and amenities such as views and restorative environments and participating in clusters of associative activity.
- Movement and other activities are related to the proximity within social and theatrical distance of associated facilities, amenities and environments.

Clusters of activity can be associated with facilities, amenities and environments. For example, sitting is a commonly observed activity in the beach precinct and people sitting in the shade of a tree can be watching others, talking to friends, eating drinking, and listening to the waves. The clusters of associative facilities, amenities and environments support particular types of activity clusters and social visitation:

- Environmental or single destination activities that access the particular properties of different forms, facilities, and amenities, such as the beach, the ocean, bus stops, beachfront cafes, SLSC buildings and viewing platforms.
- Functional, social or recreational activities associated with showers, shade, shelter, seating, bench tables, covered areas, grassed areas, children's playgrounds that are permeable and in proximity to adjacent environmental amenities such as the park, beach, ocean and views. These attributes support the most diverse activity clusters and intergenerational visitation. The activity clusters are related to children playing whilst adults sit, talk, eat, drink and view and they are largely located along the beachfront transitional corridor.
- In the beach precinct the beachfront transitional corridor is closely associated with the activity of promenading. Promenading is a more social, restorational or recreational activity than movement as transit along streets or roads. People promenading are often talking, interacting and watching others, experiencing the environment and taking in views as they walk.
- Localised and exceptional activities associated with enclosure or patterns of high local use. This pattern is found largely at Mermaid Beach. The foreshore park here is disconnected by barriers on all sides and this has produced spatially disconnected visitation. Viewing is a specific choice of activity at the viewing platforms in beach precincts without a beachfront traverse path such as Mermaid Beach.
- Beachfront residents can also participate in personal and social activities that are reliant on the location of their homes. Houses have been designed to be as close to the rear edge of their property as is possible to take advantage of the views, and where they can access personal facilities to enhance viewing and connection to nature.

Having observed the patterns of visitation and the implied approval of place by the degree of visitation to the different beach precincts and locations, the questionnaire asked the respondents to identify their residential origins, preferred pattern of social visitation and frequency and duration of visitation. Preferences and the level of importance they associated with built forms, facilities, amenities, activities, public access, management, development and restrictions associated with beach precincts were also reported. In summary it was stated that:

- Beach precinct visitation is relational to how far people live from the beach. There are more residents of beach suburb users in beach precincts, followed by other city

residents and regional residents. Interstate and overseas tourists are in a minority. The frequency of visitation varies from most days to about once a week but significant numbers of people only rarely visit beach precincts. The duration of stay is very likely to be between 1 to 4 hours.

- People choose beach precincts largely based on a combination of factors. These are convenience, co-location of facilities, amenities and activities, attractive beach qualities of clear water and safe swimming, to enjoy the views, walk, and swim, relax, recharge and for personal and social enjoyment with friends and family.
- Facilities in beach precincts that meet fundamental physiological and safety needs such as restrooms, showers, shade, parking and security are more highly valued by visitors than facilities which meet sectional interests such as SLSC buildings, public transport and picnic areas. This is thought to relate to people's preferences for activity and visitation and the nature and intent of visitation.
- Facilities such as children's playgrounds, cycle racks, exercise equipment and barbeques are the least highly rated facilities for most respondents. There was a largely indifferent response to facilities that can characterise other beach precincts in other countries, but which are largely absent in most Queensland beach precincts such as ice cream parlours, amusements, and mixed retail.
- The very low preferences expressed for bars/pubs is of interest, as it may infer a rejection of the party beach precinct with associated loud music, alcohol and anti-social behaviours, especially in relationship to family-oriented destinations. This may also help to explain the Gold Coast resident preference for Burleigh Heads over Surfers Paradise (Lebreton 2006).
- Tolerance and preferences reported for preferred activity and behaviour in beach precincts and restrictions of use indicate the highly car-dependent nature of local visitation, with respondents preferring low or no parking fees. Although dogs are permitted and alcohol is available in beach precincts, people wanted restrictions on them. There is also support for restrictions on the use of vehicles, skateboards, cycling and activities such as street vendors, music and buskers. A minority of respondents wanted no restrictions at all.
- Preference for the existing state of affairs was also expressed by the few people who responded to requests for suggestions on the range of facilities and activities,

indicating that people are largely content with what the current beach precincts provide.

- There was some support for the introduction of activities that would probably require new facilities and some form of governance and sponsorship. This is reflected with a degree of support for waterparks; children's play areas, piers and jetties as well as some support for more of the existing facilities such as seating, changing facilities and beachfront paths.
- There is a very strong preference for foreshore-parklands, boardwalks and esplanades reinforcing the concept of promenading as one of the primary functions of beach precincts. Respondents also identified public access, comfort and enjoyment and protection of the natural environment and social use as reasons to favour beachfront development which allowed egalitarian access to the benefits of the foreshore and beach. Resorts, private homes and apartment received very little support. Respondents strongly favoured measures to change the law to prevent beachfronts being developed.
- The brief inquiry into the meanings and values respondents attached to the seaside suggest that respondents place the highest value on a relaxing natural environment, which is centred on an interpretation of the beach precinct as a quiet, peaceful place to recover from the stresses of daily life and support mental health as social, stress free and peaceful destinations. These public meanings of the beach precinct are somewhat different to the current council emphasis placed on policies for design for physical activity and cycling (Gold Coast City Council 2012b).

The observed design, visitation and usage of the beach precincts also show that the beach precinct design solutions suit the particular social, cultural and political preferences of members of the dominant and project groups who have made the governance and design decisions in those precincts (Castells 2006). This includes the allocation of transitional locations to beachfront properties, the design of shared paths in all the precincts and the location and size of SLSC buildings and parking facilities.

The values of the dominant and project groups on the Gold Coast have also created constituencies of advantage and disadvantage in beach precincts. The constituency of advantage includes those who are recognisably members of dominant and project identity groups including adult males, beachfront property owners, tourism and real estate interests,

cyclists, surf lifesaving clubs and members of professional, institutional and political groups with an interest in the design, use and management of the beach precincts.

The constituency of disadvantage consists of children, carers, seniors, socially, economically, perceptually and mobility-impaired people, women particularly older women (Section 5.5.2) and, in the context of the Gold Coast, all those people who live in inland and hinterland suburbs (Section 1.5.1).

The findings or conclusions drawn from each of the data collection methods employed in this thesis are considered indicative, rather than conclusive (Lincoln and Guba 1994). This is because their validity is dependent on the context of the place, the period of time, and the observational difficulties encountered by the researcher (Dey 1993).

However, in the context of the purposive and layered collection of data by empirical observation and inquiry, and a degree of validation from other academic sources and methods, the data collected in this chapter is able to make assertions and hypothesis of enduring value beyond their initial context because of the use of methodological triangulation (Denzin 1989).

The research indicated that the terminology, concepts and ideas commonly known to the urban design and planning professional are likely to be interpreted differently by the layperson. Simply put, people are unlikely to understand questions phrased for professionals as the indifference to 'mixed retail' indicates. It was also noticed that short inquiries are limited in exploring peoples preferences for environments, facilities, activities and amenities as people can be assumed to adapt to the existing environment and may be limited in their ability to visualise alternatives to the existing.

The research to date has provided some answers summarised in this concluding section to the subsidiary research questions (Section 1.7). These are the expectations, preferences and values of different users for beach precincts and how well these are met by the urban design of the public realm in the different beach precincts of the study.

The research to date has also formulated lines of inquiry to further explore the themes and topics that were identified in this and the preceding chapters. This leads us into the final chapter that uses textual analysis of the informal literature and professional opinion in a Delphi policy process to examine public and professional opinions on the urban design and planning of beach precincts.

Chapter Six Public and Professional Meanings of the Urban Design and Use of Place

Without a plan the gradual accumulation of piecemeal acts will create a thousand mistakes of organisation, twisted relationships and missed opportunities. Without a plan....what guarantees have we that the riverfront and its potential beauty will not be gradually destroyed by random plan? Christopher Alexander (1987).

This chapter continues and concludes the collection of data on the relationship of people and place in order to build a holistic picture of relationships and patterns of activity and behaviour that can be associated with specific locations in the beach precincts (Section 1.7).

In particular, it examines the reasons that people engage with public space to meet their needs for recreation, relaxation, restoration, physical activity and entertainment. As Carr *et al.* (1992a: 92) observed, ‘places that do not meet people’s needs or serve any important functions for people will be underused and unsuccessful’. Conversely, this observation implies that places can be judged by the intensity and diversity of observed activities, provision of facilities, access to amenities and the quality of their urban design.

One of the key issues in urban design is to articulate the values held by people regarding the design and use of space (Carmona *et al.* 2003). It is proposed that some of those values are negotiable and transient but some are essential, enduring and non-negotiable if the places being designed and built are to meet enduring human needs and not merely reflect passing fashions. This perspective may be particularly true with places like seaside towns that rely on public access through the transitional spaces, from built-to-natural environments, to create reasons for people to value the unique cultural resource they represent.

Rapoport (1982) argues that the meanings different environments have for people are characterised by an overall affective response rather than a detailed analysis of specific aspects. The relationship people have with place is a more latent than manifest function and affected by instinct, emotion, ideals and image. According to Relph (1976), users of place respond to places on a global, emotional and instinctive level.

The responses to the meanings of place articulated by Rapoport (1982) and Relph (1975) contrast to the approach of some planners who may be professionally inclined to a detailed, rational and cognitive approach to the design of place (COAG Reform Council 2012) and planning regimes based on a top down, regional planning approach (Queensland Government 2009).

To paraphrase Relph (1976), the beach precinct is simultaneously global and local, and is characterised by the beliefs of a wider society to support their cultural practices, activities and behaviours, which are dependent on the historical and cultural changes taking place in that society (Relph 1976: 3). The following subsections will report on the content analysis of the localised Gold Coast Oceanway and globalised public access articles.

The chapter, as a whole, is concerned with examining the differing beliefs, opinions and cultural values of individuals and groups that govern the urban design of beach precincts by determining legal boundaries and permissions for public and private activities which are supported by the provision of public infrastructure, favouring particular groups and activities (Hofstede 2001).

The first part of this chapter extends the inquiry into people's preferences for the urban design and planning of beach precincts conducted in Chapter Five. The second part of the chapter will seek to inquire into professional opinions about the nature of beach precinct urban design and planning by employing the Delphi research method (Turoff 1970). This is expected to reveal how and where public and professional beliefs and opinions converge and diverge on the urban design and planning of beach precincts.

6.1 Analysing the Beliefs, Opinions and Values Affecting Beach Precincts

This research methods employed in this section partly respond to the limited body of peer-reviewed literature on the topic of public access to beaches and the urban design of beach precincts. It also recognises that there is a body of informal literature available on the Internet. This informal literature allows an inquiry into the topics to be conducted using textual content analysis (Kozinets 2002) using two sets of articles: Oceanway articles, which were concerned with the construction of new sections of the project on the Gold Coast, and public access articles, which were focused on the global issue of public access to beaches.

The collection of the articles used Google™ alerts for content that included 'public access to beaches', 'foreshore development' and 'Oceanway'. This created a database of blogs, editorials, forums, news articles, reports, organizational and government web pages over a six month period from October 2010 to March 2011, and up to March 2013 for articles relating to the Oceanway. As the survey progressed beyond these dates it was noted that online links were directed to deleted or archived web pages, or in a form that did not allow comments posted previously to be seen.

The main internet sources were online newspapers or web pages, in the form of editorials, forum, blogs and opinion articles as well as articles by reporters in online newspapers and these are usually attributable to an identified author. The authors of government or non-government organisations web pages were usually anonymous.

The other, often anonymous, authors are those who commented on the articles where the publishers allowed comment. These commentators are frequently subject to censorship and are obliged to conform to the comments policies of the online publishers, who control the way comments can be posted to the online newspaper or blog page.

There were 27 articles concerned with the Oceanway with 912 comments; this includes comments from serial posters to a single or subsequent article. There were 152 articles with 571 comments relating to public access to the beach and foreshore developments during the period of study. The most active jurisdictions were the United States (n95 articles) particularly California (n25), Texas (n19), Florida (n14), North Carolina (n7), New York (n6) and New Jersey (n5). Other prominent jurisdictions included New Zealand (n17), Australia (n13) and Canada (n7). There were also six other countries with articles on the topic of public access. Thailand (n3) and one article each for the Bahamas, Bahrain, Dominica, Malta and Peru.

The Oceanway narrative is more focused on the governance and accessibility issues within the beachfront transitional corridor. The public access articles are related to the transitional spaces that provide public access to the beach. The public access articles also discuss the governance and accessibility of the transect pathway from the built to natural environment and the public infrastructure to support visitation, behaviour and activity.

The articles do not consciously address the issues of the urban design and planning of the public and private realms of beach precincts (Altheide and Schneider 2013). However, they are expected to reveal the conflicts, concerns, beliefs and opinions of different groups about the governance and design solutions of the public space network of different types of beach precinct. The review of the informal literature was also understood as a method of accessing the opinions of people whose voice may also be under-represented in the dominant political discourse (Glasser 1992).

The Coding Process

The coding process adopted for the content analysis made a distinction between authors and commentators. Authors can be largely considered representative of professional, informed opinion and the commentators often express their personal opinion informed by experience of the issues as well as possibly being involved in the issue at a local or professional level.

In the Oceanway articles there are authors and commentators who are frequent contributors and their viewpoints may be over-represented. In the public access articles, this situation is less obvious as the articles are from diverse publishers and places. In some cases the author or commentator may be lobbying a particular viewpoint which is representative of dominant, project or resistant group perspectives or they may be employed to post to articles that are of concern to different groups (Miljan and Cooper 2003).

Systematic coding was used to organise and analyse the data from the informal literature into data segments related to the meanings that occurred in the text (Bliss *et al.* 1983). In each case, the content of the text was examined, paragraph by paragraph, by its overall meaning, so it could be assigned to a predetermined general category of descriptive code. The paragraph was then examined for the more specific meanings that related to the descriptive code in order to build emerging patterns codes. The final level of coding was content code which elaborated upon the meaning found in the pattern codes (Maxwell 2005).

An example of this coding approach is illustrated in Figure 6.1. The globally-sourced public access and the Gold Coast Oceanway articles have similar descriptive codes. The differences arise from the intent of the analysis and the content of the articles. Public access issues were more diversely located and often concerned with legislation and jurisdiction. The Oceanway articles report the conflicted narrative that surrounded the resistance to construction of public infrastructure in the beachfront transitional corridor on public land adjacent to private property.

Deductive and inductive methods of approaching the task of coding data were employed. The deductive method used in the content analysis of arguments was to gather data for the topics of interest to the research, or to organise thinking about the data from a particular analytical approach in order to address previously identified topics and determine descriptive codes and some of the pattern codes (Miles and Huberman 1994).

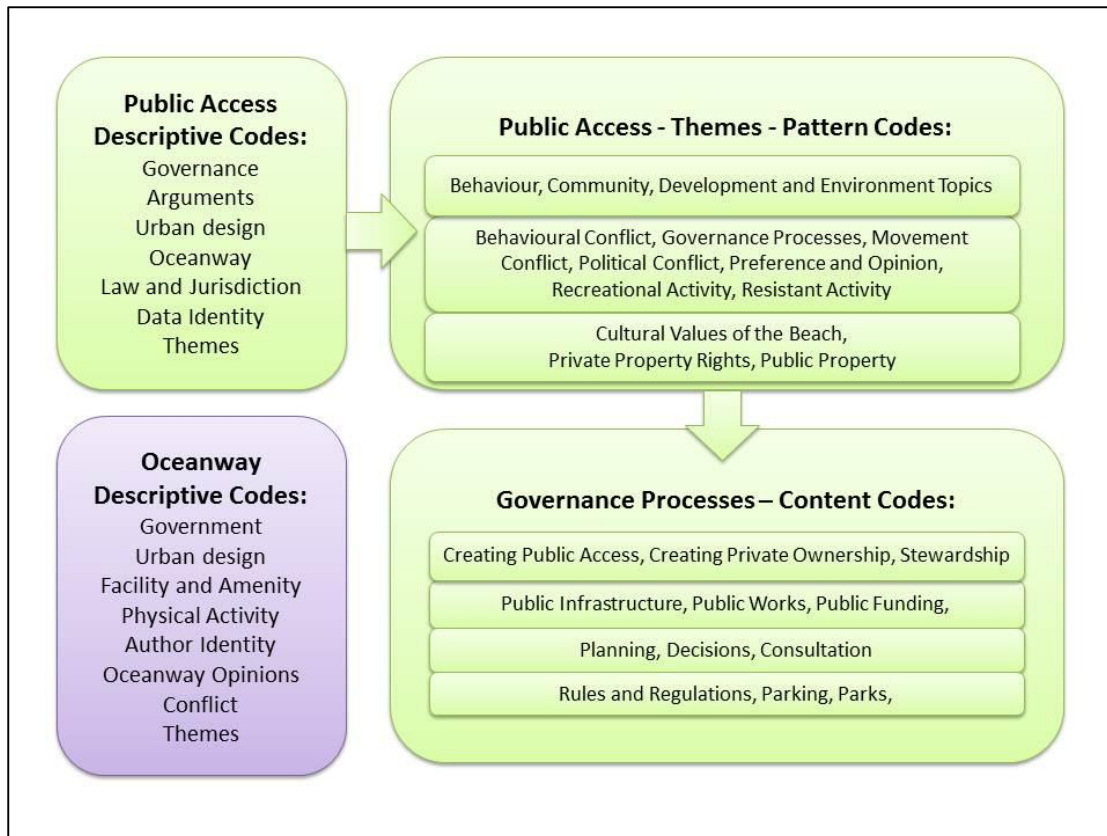


Figure 6.1: Descriptive, Pattern and Content Coding of Public Access and Oceanway Data (Author 2013)

The inductive, iterative process reviews the data by ‘thinking up’ to create node categories and ‘thinking down’ from the categories to interpret material that relates to them to elaborate those categories. The types of coding used in the inductive process include using the following approaches to coding that are not necessarily exclusive of each other (Bazely 2008).

- using descriptive coding such as the date of publication, author and the professional status of the author;
- picking words or short phrases directly from the text, as the text is read, to create nodes that can be merged or adapted as coding progresses;
- coding from broad categories such as ‘urban design’ and coding on from the data to create nodes that relate to that category, and
- coding from concepts to explore early ideas to refine, revise and describe those ideas.

An iterative process to continually review and revise the node categorisation or the process of coding was adopted that allowed for the renaming, merging or even deleting of initial nodes if other categorisation proved superior to those created during the initial coding process (Toulmin 1958). These periodical reviews continued throughout the coding process.

Singular reference nodes were obvious candidates for merging or deletion, but they are also sometimes significant. For example, one article described a case of altruism from a person who wanted the provision of beach access across his property without any obvious personal benefit (Molloy 2011). Other instances of keeping low incidence coding occurred where the content was a theme of interest to the research, such as boating and fishing as activities.

An example of coding of a paragraph from an article from the Gold Coast Bulletin posted by a commentator known as Ben is shown in table 6.1. The comment responds to the Gold Coast Mayor Tom Tate being quoted as saying ‘We already have a great Oceanway that millions come to walk on every year - it's called the beach,’ when explaining the reasons he had for the cancellation of a section of Oceanway planned by a preceding council (Fineran 2012b).

Ben posted, ‘You can't push a pram or ride your bike on the beach Tate...what a bad decision you have made, and I hope it's not to help your rich buddies that are having a whinge. We need that walkway for safety reasons! I wish I knew you were going to do this before I voted for you, very disappointing start as mayor.’

Table 6.1: Example of Pattern and Content Coding (Author 2013)

Pattern Code	Content Codes
Author Identity	Commentator
Conflict or Antipathy with Facility or Amenity	Beachfront residents, council, politicians, the wealthy
Attitude to Oceanway	Walkway
Physical Activity	In favour of Oceanway, in the public interest, a personal perspective
Themes	Cycling, pushing a pram, walking
Urban Design	Conflicted interests, election threat, motivation, political processes, public safety, sarcasm
	Accessibility, governance, human need and scale

The data assembled during the coding analysis is both rich and layered and there is probably much more to be drawn from it than is presented in this thesis. However, the parameters of the research questions and the intent of the coding limited the analysis to reporting the themes and topics which are connected to the research questions outlined in section 1.7.

6.1.1 Locating the Boundaries of the Conflict: Global and Local Narratives

The research to date has provided evidence that there are transitional corridors, locations and edges in a beach precinct that serve particularly important functions for visitors, residents and

tourists. These are the gateway transitional corridor along the transect pathway to the beach from built to access form; the beachfront transitional corridor along the traverse path; transitional locations such as social nodes, beach access points and facilities for activity and amenity; and, the transitional edges of the interfaces between public and private/commercial property and the different forms of the typology.

The coding of the 23 articles on the subject of the Oceanway referred to different places along the Gold Coast coastline, with localised narratives and this is reflected in the content of the comments to the articles. In each case, the conflict was about the proposed construction of new sections of the Oceanway along the dunes between beachfront properties and the beach.

The incidence of comments in favour of the Oceanway, (39 or 84% of incidences) as opposed to those who are against it, (76 or 16% of incidences), is a remarkably similar percentage to the preferences for and against building private homes along the beachfront and for public access to the beach found in this thesis (Section 5.4.4).

It is clear from the content analysis that the Oceanway project and the issue of public access to beaches produce a range of highly conflicted opinions. In particular, authors and commentators divide largely in favour of public or private property rights. All parties believe that the appropriate governance of the issue should activate their public rights of access or private rights of enjoyment of property to participate in activities and behaviours in an environment they value. The conflict arises in the way that people perceive the boundaries, regulations and rules that should be applied by usually local levels of government to produce a physical environment that enables their 'rights' to be activated.

The beachfront transitional corridor along the access form to the beach is where the sharpest conflict between public and private property rights occurs (Killoran 2013b). The conflict for the control of the corridor is pervasive and not limited to the Gold Coast. Indeed, as this chapter will demonstrate, it is a matter of concern around the world. Any inquiry into the urban design of beach precincts would be incomplete without an inquiry into the issue of public access to beaches from the access form, as this particular transition affects the nature of all the activities and behaviours that are possible in a beach precinct.

The sections of the Gold Coast beachfront where the conflict is located are in Surfers Paradise, south of the existing Oceanway parallel to Garfield Terrace (Willoughby 2011a) and in Tugun, parallel to Golden Four Drive (Killoran 2011b). There is also recurring conflict

over the desirability of creating a new section of Oceanway in the suburb of Mermaid Beach. This would be constructed parallel to Hedges and Albatross Avenues along the dunes. However, the council has stated this section cannot be built as the dunes are unsuitable to support an Oceanway pavement (Gold Coast City Council 2011a).

These Oceanway and public access articles have revealed that the nature of the built to natural environment relationship were instrumental in the way the design of the beach precinct was resolved to either favour, restrict or prohibit public access to the beach. The differing interpretations and definitions of the actual location of transitions and edges between the two environments were identified as a vital determinant of conflict over public access on coastlines that are inherently unstable and likely to move over time.

Figure 6.1.1 summarises the spatial characteristics that affect coastal decision making about where to permit building in the relatively stable area from the foredune inland. It also indicates where legislation and planning decisions have had the most effect on the degree of public access to the foreshore and views. The beachfront transitional corridor from the foredune across the dry sand is where the public conflict with private property subdivision and development peaks. Some jurisdictions, for example, only recognise public access rights to the intertidal zone, while others allow privatisation of the dry sand. Others understand that public right to the intertidal zone is of little use if people cannot reach the foreshore for their preferred uses and activities (Surfrider Foundation 2012; Corkill 2013).

Cases of conflict were examined in the Oceanway and public access articles. The rights of public access and private ownership were concerned with the extent of control of public infrastructure and permissible activities by private property owners to any adjacent public land on the backshore and foreshore, and in the public space network of pathways and roads to the beach access points. Other conflicts over public access to beaches occur where beaches are closed for defence (Ministry of Defence 2013), public safety (Hall 2013) and environmental protection purposes (Grove 2010).

Public access to beaches is an *a priori* conflict in many jurisdictions. McKeon (1970) defined the conflict as between two kinds of recreation - the public and the private uses of the beach. McKeon saw the origins of the conflict in terms of private interests confining the public to the wet sands through the control of access from the dry sands. This creates a *de facto* private beach that rendered the public's right to the inter-tidal zone valueless.

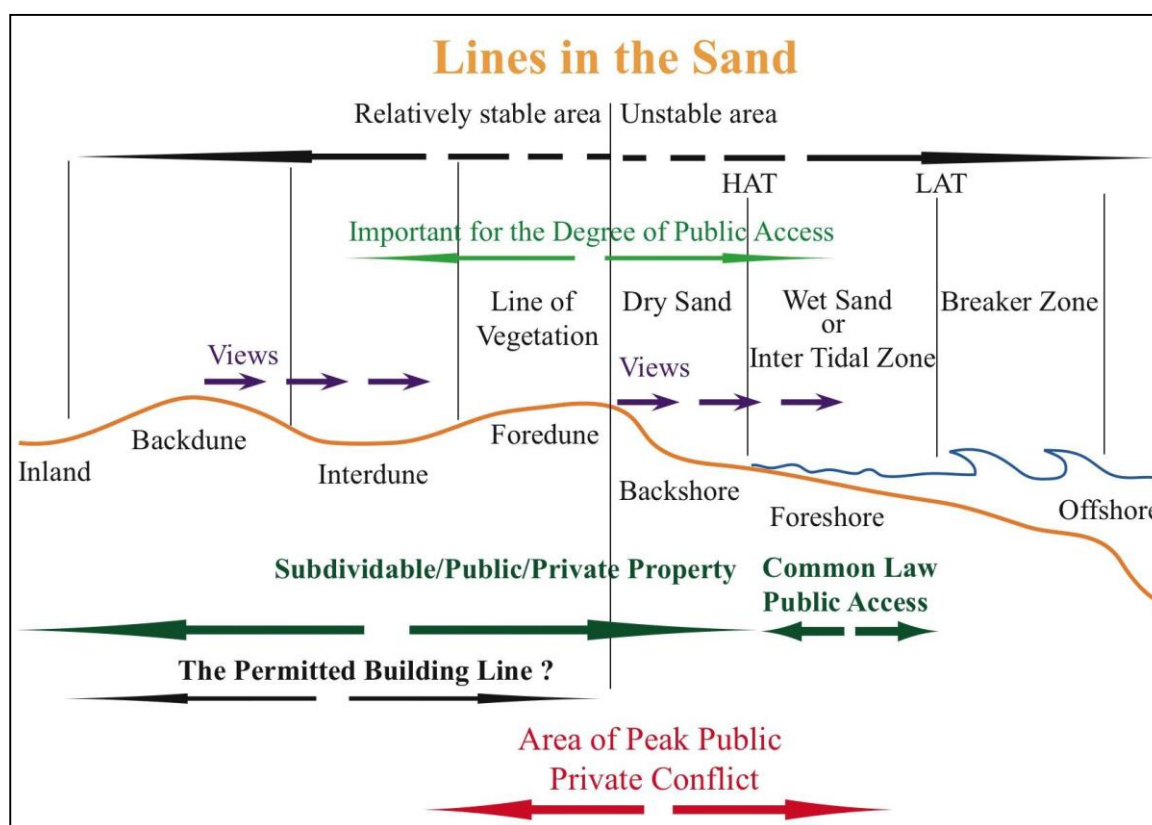


Figure 6.1.1: Lines in the Sand: the Transitional Boundaries of Beach Precincts (Author, 2011)

The incremental erosion of the public right to use beaches is a process that is both historical and contemporary (Wright 2007). The quantum of suitable beachfronts within a driving distance of urban conurbations is effectively finite. Every new beachfront development that occurs reduces the accessible beach frontage for the rapidly growing coastal populations (Australian Bureau of Statistics 2004; Gurran, Squires and Blakely 2006). In the Gold Coast, half of the beachfront has privatised access beachfronts like Mermaid Beach. This results in public use and activity being concentrated on the more accessible beach frontages of the Gold Coast that only has three significant foreshore parks along that coast (Wake *et al.* 2008).

The assertions made in the Oceanway and public access articles are often put forward as claims of fact as to the different rights of the parties to public access or private property enjoyment. These are usually accompanied with claims to the value of those rights and interpretation of laws and policies to support those claims (Hart 2007). Many of these claims can be seen as claims of concept, as the wording of the claim mix value with fact. Two conflicting positions of public access and private property rights emerged from the content analysis:

- The private property viewpoint claims an extension of private property rights to control how many and what sort of people can use or visit their immediate environment. Their strategic intent is to deny or restrict access to the public property between their properties and the beach and limit the supportive infrastructure for non-residents to access or stay in the beach precinct. This strategy is used consistently, with local variations, in all the jurisdictions that were studied.
- The public access viewpoint claims a degree of inalienable right to access the beach. However, the governance response and strategies change in different jurisdictions. In Australia, local government is responsible for maintaining beach access, defence, restoration and replenishment as all beach are considered public even if they have beachfront property. In the USA however, beach defence, restoration and replenishment funding is tied to minimum federal standards of public access and public infrastructure to support visitation, activity and stays at the beach.

There have been attempts by higher levels of government in the jurisdictions examined to limit the public liability and increase the public benefits of the beaches by restricting building on the beachfront. One such attempt occurred in the United States. The Coastal Barrier Resources Act (CBRA, Public Law 97-348, 1982) sought to restrict building on Barrier Islands. Although primarily intended to limit the exposure of the federal disaster relief budget to coastal development, this act has failed to prevent beachfront development on the fragile barrier islands along the eastern seaboard of the United States (Salvesen 2005).

According to Salvesen (2005), the development that has occurred on the barrier islands usually results in exclusive, gated communities that prevent public access to the beach. In the USA the act has often been bypassed by coalitions of developers, local and state governments who then pass on the risk of infrastructure replacement and protection to the U.S. Federal Government. The effects of this subversion of the intent of the act became very clear during events surrounding hurricane Sandy when the federal government was forced by political expedience to promise public relief for beachfront residents (Rudolf *et al.* 2012).

For the Gold Coast, the significance of the circumvention of law in the development of fragile barrier islands, in America, is that developers constitute a global community and the techniques used to leverage profitable developments in one place are often adopted and utilised elsewhere. There is a perception that the connections between the people involved in development of the Gold Coast and those who have created developments in Florida and

California have had the same negative effects on public access to the beaches, as found in the American models that inspired past developments on the Gold Coast (Burchill 2005).

The most active jurisdictions during the period of the content analysis were in the United States particularly California, Florida, New Jersey and Texas, followed by New Zealand and Australia. New Jersey, New Zealand and Texas are seen as special cases due to recent legal and political activity in either the law or policies governing public access to beaches. Australia is, for its population size, also well represented in the narrative of conflict. This may be due to the length of coastline or its adoption of American development paradigms since the 1950s (Burton 2009). However, there were no unequivocal conclusions to be inferred from the data examined.

The absence of some jurisdictions may be as significant as their presence. Articles and blogs tend to concentrate on current newsworthy stories. These stories naturally involve conflict, as, if there is no conflict; there is probably little news value. There are few articles from the U.K, even with its high population density and coastal settlement patterns. This may be due to public access being more assured there, a more active public access rights narrative, the nature of the existing beachfront development dating from a pre-automobile period, or a less permissive or amenable planning process to the privatisation of beach frontage.

Two jurisdictions with major reported conflicts were the states of New Jersey and Texas. In New Jersey the 2010 election of a Republican Governor prompted a review of the pro access policies of the previous Democratic Governor's administration (Hester 2010; Moriarty 2011 and Hess 2011). In Texas, where the Open Beaches Act 1959 states that the public shall 'have the free and unrestricted act of ingress and egress to and from state owned beaches, extending from the line of mean high tide to the line of vegetation', conflict arose over the rights of private property owners to restrict public access where a hurricane had moved the line of vegetation (Blais 2010; Lopez 2011)

In Florida, the conflict is often between the state, inland counties and small beachfront cities over the public access to beaches in exchange for state and federal funding of beach renourishment projects (Smart 2010; Kelly 2011). In California, the conflict is usually between the California Coastal Commission (2014) and coastal cities and towns, organisations and individuals (Lovett 2010; Echavaria 2011). Very few jurisdictions are actively purchasing beachfront property to create public open space. Hawaii County is one

exception that may be related to indigenous rights and a particular cultural perspective of historical connection to the ocean for Polynesians (Corrigan 2011).

In Thailand, beach access has also been tied to land takeovers by powerful local entities and accompanied with threats to garbage collection from protesting residents, if the local entities did not prevail. Protestors were claiming that public land had been seized whilst matters were still before the courts, despite Thais having similar public access rights to the dry beach as in other countries (Sidasathian 2011).

In the Dominican Republic, it was reported that drug traffickers and ‘land grabbers’ were using threats of violence to force a home and business owner off their property to make way for traffickers. The drug traffickers were said to be looking to develop their business at one of the Republic’s best wind and surf beaches at Playa Encuentro (Manon 2011). In Malta, a high wall was erected across a beachfront public footpath by the Exiles Water Polo Club. The article accuses local authorities of irregularities in processing of planning applications in favour of well-connected people and organisations (Zammit 2011).

In the USA, state and federal funding of beach renourishment and defence works is linked to minimum provisions of public access point, public toilets and parking spaces. When parking is provided by the local authority, it is often through the use of permit or annual beach pass. Sometimes the provision, cost and difficulty in finding and using available parking near to the beach access appears to be used as a method to exclude ‘undesirables’. Paid parking is seen as a permissible imposition on outsiders, and is often accompanied by residents’ parking permits and illegally erected ‘no beach access’ signs (King 2011; Maley 2013).

6.1.2 Conflict over Public Access in Beach Precincts

The Oceanway and public access articles are written to address different political issues. The Oceanway is a local issue about a particular piece of public infrastructure, but few authors or commentators choose to address the global dimensions of the project, despite comparisons with beach precincts around the world (Willoughby 2011c). The public access articles are usually addressing local issues that are often related to legal and physical access from the built environment to the beach.

Through content analysis it can be seen that the patterns and relationships of coding reflect the different patterns of response to the two types of article. The Oceanway articles are a progressive narrative of a public infrastructure project in a contested location over a period of

time, with on again, off again, twists and turns as the political environment changes due to local council elections. Public access articles often react to the closure of public access by new development (Ruengwutchanapuech 2010), beachfront residents (The Times Editorial Board 2013) and other events (Echavaria 2011).

There are, however, similarities between the two types of article and comments in the meanings found in the themes. These groupings can be summarised as activities; behaviour, community, development, environment, governance, public and private property. The most frequent comments have meanings that are about governance, public property, behaviour, private property and activities (Tables 6.1.2a/b).

Although frequency of reference can indicate the level of importance of the content code to the author or commentator, there is no implied ranking of content. Rather, it is indicative of the likelihood of commentators associating particular issues with particular themes. The comments do however indicate the way that many people address and relate to the issues of the Oceanway project and public access to the beach.

Table 6.1.2a: Frequency of Coding of Oceanway Articles by Content and Theme (Author 2013)

Coding	Relative Frequency of Incidence of Coding by Content				
	Very Frequent	Frequent	Sometimes	Rarely	Very Rarely
Oceanway: Themes	Political Process 168	Economic	Beachfront Owners	Community	Sexual
	Regulation 161	Costs 88	Losses 34	Groups 16	Practices 5
	Conflicted Interest	Crime 73	Threats 32	Disability 14	Ageing
	156	Traffic 46	Sarcasm 30	Threats by	Population 5
	Public Safety 108	Competence	Consultation 28	Cyclists 13	News Media 4
	Behaviour 97	41	Tourism 27	Environment	Envy 1
	Motivation 97	Legal Action	Delaying Tactics 24	11	
	Egalitarian Values 92	36	Enjoyment 22	NIMBYs 9	
			Climate Change		
			and Erosion 20		
			Deception 20		
			Rates and Taxes 20		
			Policing 20		
			Legal Liability 19		

Table 6.1.2b: Frequency of Coding of Public Access Articles by Content and Theme (Author 2013)

Public Access: Themes	<p>Governance (148) – Stewardship 37, Public Infrastructure 27, Public Works 23, Planning 17, Decisions 10, Parking 9, Consultation 8, Public Funds 8, Regulations 7, Parks 2.</p> <p>Public Property (147) – Creating Public Access 54, Reasons to Favour Public Access 43, Public Land Rights 40, Public Safety 10.</p> <p>Behaviour (94) Fears 21, Motives 20, Anti-Social Behaviour 19, Beliefs 11, Responsibility 7, Spirituality 6, Subversion 4, Rights 3, Sexual Behaviour 2, Envy 2, Altruism 1.</p> <p>Private Property (83) – Creating Private Ownership 25, Private Land Rights 22, Reasons to Favour Private Property 18, Private Wealth from Public Expenditure 8, Property Protection 8 and Privacy 2.</p> <p>Activities (71) – Other 13, Walking 9, Passive 7, Surfing and Watersports 6, Tourism 6, Active 6, Boating 6, Fishing 4, Nudism 3, Driving 3, Cycling 3, Sunbathing, Photography, Jogging, Swimming, Sitting.</p> <p>Environment (34) – Environmental Damage 14, Environmental Protection 6, Climate Change and Erosion 4, Ecology 4.</p> <p>Community (28) – Democracy 11, Community 8, Religion 2, Age and Gender 2, Insiders, Politics, Race, Outsiders, Visitors.</p> <p>Development (13) – Aesthetics 3, Commerce 3, Urban Renewal 3, Beachfront 2, Private Property Acquisition 2, Development Approval, Amusement Parks, Foreshore Parks.</p>

Although the Oceanway and public access articles were similarly concerned with public access to the beachfront, they vary in their pattern and content of their coding to conflict. This is partly due to the specific focus of the Oceanway articles on the use of the public land adjacent to private property, and the general issue of the nature of public access to the beach through the transitional locations in the public access articles. Coding frequency is also affected by the nature of specific national or local issues that arose during the data collection period. The differences in the contexts of the two types of article are reflected in the structure and frequency of the coding for conflict in the articles (Table 6.1.2c).

The commentary of the Oceanway conflict is focused on the actions and behaviours of council, beachfront residents, politicians (local and state) and opponents of the Oceanway project (Weston 2013). The public access articles are focused on the actions and behaviour of beachfront property owners who restrict public access and are alleged to have used illegal tactics and political influence to maintain their control of the adjacent dunes and, in some cases, the beach (The Times Editorial Board 2013).

The arguments, deployed by the beachfront residents and supporters of private property rights to control the adjacent dunes and beach, often include claims that public access will create or increase anti-social or sexual behaviour and increase criminal activity against the beachfront residents (Stojceska 2012). Proponents of public access often counter with an argument that

increased use and improved local public infrastructure, such as lighting on the foreshore, will increase passive surveillance and accessibility for law enforcement officials and maintenance of coastal defences (Killoran 2011b).

Table 6.1.2c: Frequency of Coding of Articles Content to Conflict (Author 2013)

Coding	Relative Frequency of Coding to Conflict				
	Very Frequent	Frequent	Sometimes	Rarely	Very Rarely
Oceanway Conflict	Council 186	Wealthy 84	Cyclists 43	Outsiders 18	Jealousy 3
	Beachfront	Infrastructure	Engineering 38	Public Access	Real Estate
	Residents 156	Cost and Time 64	Traffic 29	15	Salespeople 2
	Politicians 130	Behaviour 62	Legal System 25	Media 14	Drivers 2
	Opponents of Oceanway 113	Proponents of Oceanway 60		Agitators 14	Prams 2
				Walkers 11	White Shoe 2
Public Access Conflict				Children 8	
	Behaviour 62	Indigenous	Confused	Drugs and	Curfews 2
	Allegations 56	Rights 18	Access 11	Alcohol 4	Noise 1
	Restrictions	Criminal	Financial		
	45	Acts 15	Benefit 7		
		Activism 13	Financial		
			Loss 6		
			Abuse 6		

In New Zealand, the topic of indigenous rights is frequently coded in the public access articles, following the introduction of a Marine and Coastal Area Bill which will restore customary title to the foreshore and seabed for the Maori of New Zealand (Tahana 2010, 2011; Saunders 2011).

In New Zealand, public access to all sea, lake and river waterfronts was initially established by the concept commonly known as ‘The Queen’s Chain’ which was introduced in the 19th century. This attempted to guarantee public access to fishing, fowling, resource and trade by providing public access to the distance of a surveyor’s chain from the high water mark of the ocean, large rivers and lakes margins (Baldwin 1999; Anderson 2003). The rights of indigenous Australian Aborigines are very rarely raised in the conflict over the Oceanway, except for an exceptional reference in the Tugun to Bilinga Oceanway planning report to a native claim over the land and water in the area (Technical Services Branch GCCC 2011).

The Oceanway articles also reported a conflict with cyclists amongst both opponents and proponents of the project, particularly in the Hedges Avenue section. This conflict includes threats to, and by, cyclists over behavioural issues in the beach precincts. This is illustrated

by a comment to an article about the 'lycra mafia' who use Hedges Avenue: 'Bikez' posts: 'With joggers using headphones, double prams, other cyclists without helmets, police cars neglecting to address those flaunting the laws the list goes on! As a cyclist using Hedges Avenue and having myself come under physical attack from the above users I guess some riders have had enough' (Bedo and Killoran 2011) (see Figure 2.4.5c for context).

There is a prevalence of ad hominem attacks by the commentators to the Oceanway and public access articles, whereas authors generally avoided this tactic. The personalisation of the conflict is found, along with the rejection of the opposing viewpoints of either beach visitors or beachfront residents by the expedient use of abuse or threats (Tatman 2011). An example of abuse can be found in a post by 'joey': 'I think it's a great idea (to introduce parking fees). It will keep the rednecks and trashy people off the beach. Too cheap to spend \$10, go hunt or hang out in the trailer park'

The private property advocates often use the fear of crime and environmental degradation as justification for restricting public access. In an article regarding the opposition of beachfront residents to a new section of Oceanway, Stojceska (2012) reported: 'Glitter Strip residents have dubbed the proposed Surfers Paradise south Oceanway a 'crimeway', saying it will provide access for thugs to steal, enter and vandalise their oceanfront properties'. In the same article: 'Residents also discussed environment issues and the impact the development would have on vegetation in the area'.

The spectre of sexual activity on the beach is also summoned up in South Australia to justify the exclusion or restriction of the public access to the beach and foreshore adjoining private property: 'Calls for a fence to keep gay men from turning parts of Mt Eliza foreshore into love nests has sparked a storm of protest' (Tatman 2011).

A particularly pointed response to the association of criminal behaviour with public access to beaches comes from the author of an article which opposes curfews on Los Angeles beachfronts: 'They didn't say that homeless, murderous, heroin users have the right to shoot-up while stabbing people on the sand and building tent colonies' and comments that it is a police matter not a public access issue (Fleisher 2010).

The beliefs of those who support the privatisation of the public commons of the beach are seen as a right. If the law does not agree, they often seek to change the law (Associated Press 2010) ignore, reinvent or subvert it (Ruengwutchanapuech 2010; Bedo 2010c; McCracken

2011). Writers and commentators in favour of private property rights often invoke the illegal activities of others as reasons to prevent improved access to beaches (Lovett 2010; Moore 2011).

Public access writers and commentators sometimes tie their arguments to emotive life experiences, especially with regard to childhood. For example: Wright (2007) laments the loss of public access to her childhood beach. To the author, this beach was a sacred space linked to her journey to adulthood. She perceived restriction of public access to the beach as a loss of democracy and an attack on the cultural values of Australia by the forces of elitism.

The theme of egalitarian values, intertwined with personal and social meanings of the beachfront transitional corridor along the beach is frequently made by writers and commentators in the sources. A commentator posts: ‘There’s already public land in front of these properties, it’s called the beach, and people sunbake on it, walk on it, play ball games on it. So what’s the big deal if a narrow strip of it is made easier to walk on?’ (Bedo 2010a).

Egalitarian values are nested in much of the narrative surrounding the various conflicts over the Oceanway and public access. This can be seen in Figure 6.1.2 which is a cluster analysis of the word similarity of the node contents of the Oceanway and public access articles. This analysis uses the Pearson coefficient to show the degree of occurrence and the frequency of words that are clustered together in the coding of the data, and displays the results in a dendrogram where proximity indicates similarity.

The public access articles more frequently associate reasons to favour property rights to property protection. Public access articles share reasons to favour public access linked to public land rights with the Oceanway articles. The Oceanway articles divide on either side of the political argument over the construction of the project, with private property rights associated with opposition to the project and egalitarian values, and public property rights and the public interest associated with support for the project.

The textual analysis of the two types of articles also tends to indicate that there are cultural and political differences in the mostly American narratives surrounding public access to beaches and the Australian conflict surrounding the building of the Oceanway. The public access articles are more often concerned with the administration of public access pathways to the beach and beach restoration (Grove 2010; Luzatto *et al.* 2011). The Oceanway articles tend to concentrate on the political processes involved in the production of new or proposed

sections of the Oceanway (Willoughby 2012b) and the resistance to those sections from beachfront residents who are considered privileged and wealthy (Bedo 2010c).

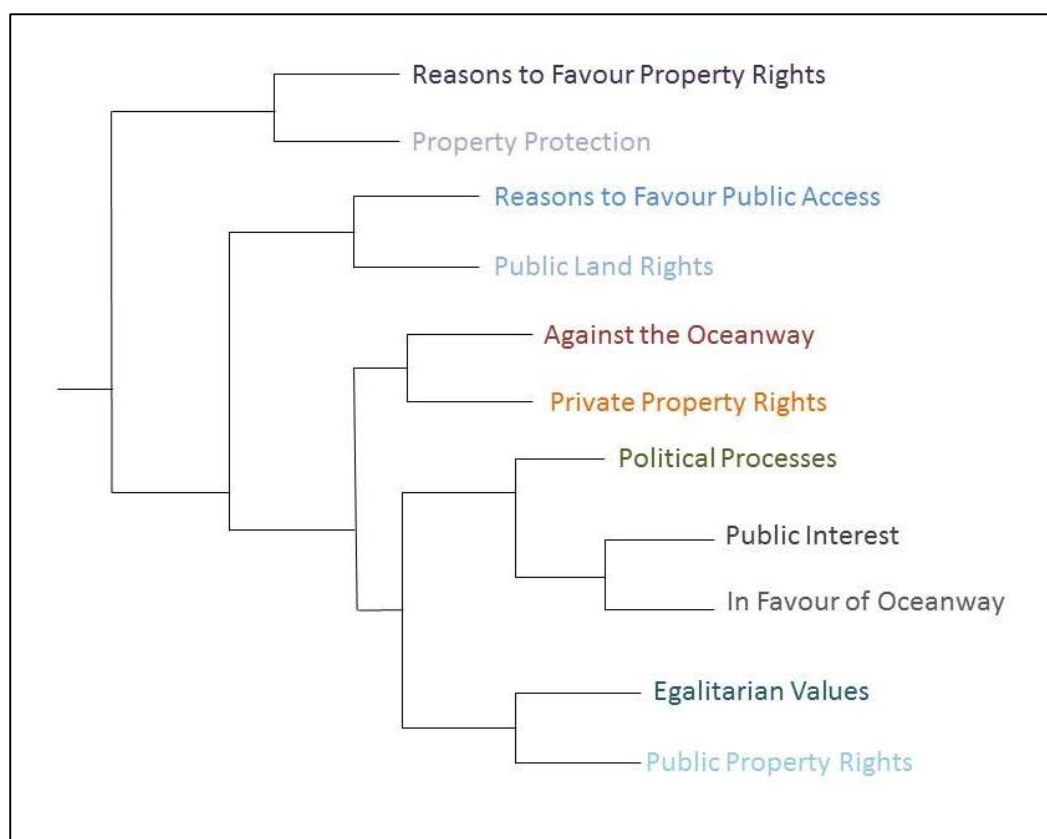


Figure 6.1.2: Dendrogram of Public and Private Rights and Egalitarian Values (Author 2013)

During the public access content analysis, two important non-government advocacy participants emerged in the analysis of the conflict between private property ownership and public access rights in the United States. These are the Pacific Legal Foundation and the Surfrider Foundation. The Pacific Legal Foundation has been active in many of the conflicts in the United States over public access to beaches (Pacific Legal Foundation 2011).

An example of this is a ruling of the Supreme Court of Texas that changed the interpretation of private property rights in the event of a sudden erosion event (McLaughlin 2010). This ruling affected the way the Texas Constitution and Open Beaches Act 1957 applied to private property, to the detriment of public access to beaches (House Research Organisation 2009; Editorial Board 2010). It is not known if the foundation has any counterparts or influence outside of the United States, but it is unlikely that the strategies and tactics employed by the foundation are unknown to Gold Coast beachfront residents.

The Surfrider Foundation is an organization founded in 1984 in Malibu, California with the declared aim: ‘our mission is the protection and enjoyment of oceans, waves and beaches through a powerful activist network’. It currently has chapters across the United States and in fifteen other countries, including Australia. It is particularly active in the states of California, Oregon and Florida (Surfrider Foundation 2011).

The content analysis tended to suggest that the Surfrider Foundation is reactively focused in responding to government policies and local planning decisions. In contrast, the Pacific Legal Foundation appears to pursue strategic legal judgements that alter the interpretation of state and commonwealth law, neutralising any legislation that affects private property rights.

The fear of incurring legal costs is an important narrative found in many jurisdictions. This tactic is an active factor in the Gold Coast with the opposition to the building of sections of the Oceanway often being accompanied with threats of legal action by residents. This is a method of delaying decision making in the Council and influencing the willingness of the council to pursue the process of designing and building on public land, adjacent to private property (Potts 2011; Killoran 2013a).

Climate change does not figure strongly in the articles, blogs or comments, but erosion and weather events do. A blog by an attorney, used to alert clients to development issues, draws attention to a reduction of public access to eroded intertidal zones, and the increased likelihood of future storm damage (Silverberg 2011). Tomlin (2011) argues that beach towns in the pursuit of revenue have ignored warnings from scientists to increase building setbacks. According to Tomlin (2011) this places an estimated USD 7.7 billion of property being put at risk in North Carolina alone. The Australian government has also identified AUD 226 billion of infrastructure at risk to a sea level rise of 1.1 metres by 2100 (Tuttielt 2011).

6.1.3 Identifying Preferences for the Urban Design of Beach Precincts

The nature of the Oceanway and public access articles does not specifically address the preferences that people have for the urban design of beach precincts, but it is possible to infer the preferences that people have for the attributes and characteristics of urban design (Table 6.1.3). The content analysis indicates that authors and commentators alike are aware that it is the political decisions (governance) made by usually local councils that allow or deter public access and use of beach precincts (accessibility).

The selected urban design principles of this study (Section 3.3) were used as pattern codes for the content analysis of the Oceanway articles. During the coding process, design values and surveillance were added to the principles as they arose in the content analysis. The incidence of coding to these urban design principles was governance (430), accessibility (140), human scale and need (50), design values (19), and surveillance (17).

Table 6.1.3: Frequency of Coding of Content to Urban Design, Facility, Amenity and Activity (Author 2013)

Coding Themes	Relative Frequency of Coding by Content				
	Very Frequent	Frequent	Sometimes	Rarely	Very Rarely
Public Access Articles Urban Design	Beach Access (60)	Land Use (24)	Human Scale and Need (12)	Parks (5)	Pathways (1)
	Accessibility (54)	Activity (22)	Parking (11)	Diversity (4)	Spatial Allocation (1)
	Governance (34)	Amenity (22) Public Infrastructure (18)	Views (8) Connectivity (8) Public Space (6)	Social Nodes (3)	
Public Access Articles Activities	Walking (9), Passive Recreation (7), Tourism (6), Surfing and Watersports (6), Active Recreation (6), Boating (5), Fishing (4), Nudism (3), Driving (3), Cycling (3), Sunbathing (1), Photography (1), Jogging (1), Other Activities (13).				
Oceanway Articles Facility and Amenity	Oceanway (272) Footpath (234) Streets and Roads (115)	Cycleway (35) Public Infrastructure (29)	Privacy (11) Foreshore Park (9) Views (9)	Beach Defences (5) SLSC (2)	Art (1) Playground (1)
Oceanway Articles Activities	Cycling (164), Walking (151), Pushing a Pram (51), Driving (31), Wheelchairs (29), Jogging (28), Skateboarding (14), Beach Activities (10).				

The public access articles, when coded from the content of the text, produced codes for a range of characteristics of urban design. The coding tends to indicate the convergence of urban design, facilities and amenities as characteristics of holistic components of design solutions for the public space network of beach precincts. The frequency of coding to content needs to be understood in the context of the articles examined.

In the public access articles, the frequency of coding of content to accessibility is expected. However, the public access articles tend to indicate that authors and commentators concentrate on the decisions made by government officials and representatives for the allocation of land use. The provision of supportive public infrastructure, like parking and toilets, was also connected to the amenity of views and human scale and need as the appropriate governance of public space.

The importance of the subject of the articles to the types of content and frequency of coding is also found in the Oceanway articles. Unlike the public access articles, activity as a content code is largely focused on movement and rarely mentions beach precinct specific activities. The influence and importance of the Oceanway as a smart transport route (City of the Gold Coast 2012) is also represented in the content coding to the theme of Facility and Amenity. Cycling is a much less commonly observed activity than walking, but it is coded much more often in the Oceanway articles and not at all by the public access articles.

There is some sense that much of the narrative in the local media surrounding the Oceanway is driven by the local cyclists who ensure their viewpoints are represented. 'Shane,' a frequent poster to the Oceanway articles, makes a claim to exclude pedestrians when posting: 'I'd rather walk on the sand. It would be a good idea to build a better bike lane, but not one for pedestrians - cycling is getting more popular, and the Oceanway will not be suitable' (Elder and Stojceska 2011).

The differences of focus and content between the Oceanway and public access articles is also reflected in the prominence of various activities in the different groups of articles. Pushing a pram (51 incidences) and wheelchairs (29) are prominent content codes in the Oceanway articles that are, surprisingly, not mentioned at all in the public access articles.

An example of an argument to support the construction of new sections of the Oceanway along the foreshore to replace the on-road sections, is provided by journalist Shannon Willoughby, who uses her personal experiences as a beach suburb resident and mother of a small child to promote the Oceanway: 'I was pushing my small child in a pram over cracks, ditches and across sections of 45-degree angle paths, all the while dodging cars, cyclists, wheelie bins, the odd ibis and, of course, other walkers'. 'The path which links one tourist hub to another is akin to somewhere in the poorest village of India' (Willoughby 2012c) (also refer to section 4.2).

It is possible by examining the coding and content of the articles to discern relationships and associations in the preferences for the physical attributes of public access, the need for facilities to support activities, access to amenities and environments which motivate and sustain visitation and the preferred behaviours for beach precincts.

The coding of content to urban design and facilities helps in understanding the relationships that people associate and use in arguments in the narrative contained in the various Oceanway

articles. Figure 6.1.3 illustrates these associations by using a Pearson's coefficient analysis of word similarity in coded segments of text, where proximity indicates relationships of the words used in the text of the coded segments.

The dendrogram indicates the relative associations used in the text. For example public infrastructure which usually includes references to lighting and closed circuit televisions is closely associated with surveillance of public space. The Oceanway is associated with governance and footpaths with accessibility in the content analysis.

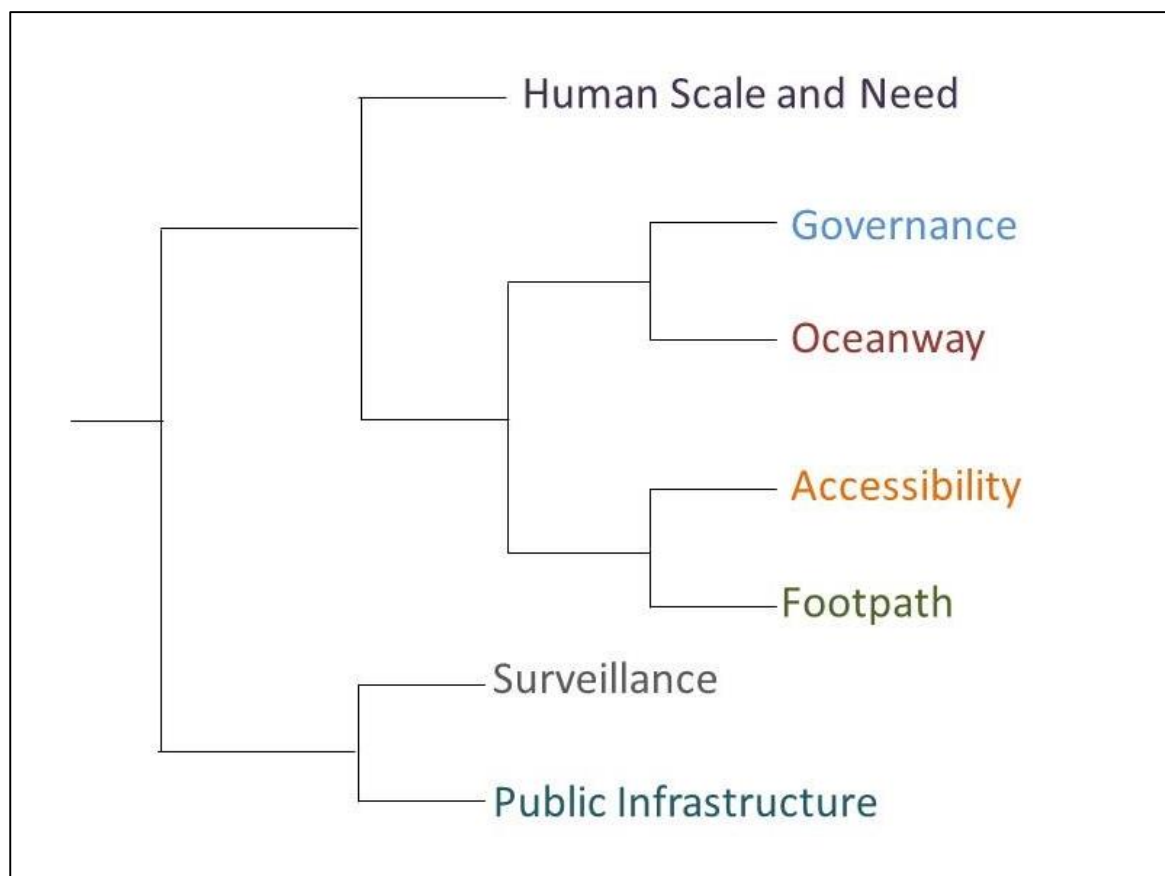


Figure 6.1.3: Dendrogram of the Associations between Urban Design Attributes and Facilities (Author 2013)

The coding analysis describes an inherent conflict between people, over the appropriate uses of public money to create and maintain the facilities and infrastructure that will facilitate their preferred activities and uses. This creates alliances of people to either create or oppose the organisation and provisioning of public space to suit those interest groups' preferences. The next section will examine the opinions of the professionals who have expertise in the design, development, governance, planning, management and use of beach precincts.

6.2 Identifying the Opinions of Professionals using a Delphi Process

The data collection of this thesis will culminate with an examination of the beliefs and opinions of a group of professionals, as intended in the research strategy adopted for the thesis (Section 1.8.3). The Policy Delphi method process, used in the following sections, has been designed to align to the subsidiary research questions 3 and 4 (Section 1.7). The process inquires into topics and themes that have arisen in the course of the literature reviews, urban design and typographic analysis, field observations, public questionnaires and content analysis of articles relating to the urban design and planning of beach precincts.

The Delphi method of inquiry relies on a structured, systematic and interactive process. The Delphi method has been developed since the 1950s to obtain reliable consensus opinions of groups of experts where statistical models are not practical or possible because of the degree of complexity of the issue. The Policy Delphi method of inquiry adopted for this research aims to build an understanding of the range of opinions on any topic from as wide a range of participants as possible (Rowe and Wright 1999).

Turoff (1970) explained that the development of the Policy Delphi research process was intended to counteract the weaknesses inherent in the committee approach to policy making. The vulnerabilities of the committee approach were seen to be caused by the size, hierarchy and dominance structure of many organisations (Rowe and Wright 1999).

Turoff (1970) characterises the committee approach to policy development as tending to reflect the psychological characteristics of committee processes. These processes include the presence of a domineering personality or outspoken person taking over the process. This often leads to people being unwilling to take a position until the majority consensus is known and being loathe contradicting those above them in the hierarchy. Committee members were also observed as being unlikely to abandon a stated position or bring up a formative idea that others may disapprove of and thereby lose face in a competitive organisation.

The Delphi method of inquiry allows complex issues to be considered by a group of individuals who are often recruited by their status, reputation, training and professions as experts in a particular field (Linstone and Turoff 2002). The method relies on structured questions, anonymous expert contribution, iteration and anonymous review of that contribution. The intent of the anonymity is to encourage experts to give an account of their responses and opinions on a topic or question on merit alone and without attribution, thereby

revealing their reasoning, understandings and beliefs more clearly than they would voluntarily do so with attribution.

Turoff (1970) considered the Policy Delphi to be appropriate for groups of between ten and fifty respondents, but thought that a group of twenty or more would be likely to reveal the different interests in the complex issues facing organisations. The Delphi group initially had twenty three members, of which twenty were either architects, planners or urban designers with one each for beach precinct activity, development and the environment. The Delphi group were drawn from around the world with more members from Queensland and Australia than overseas (Figure 6.2).

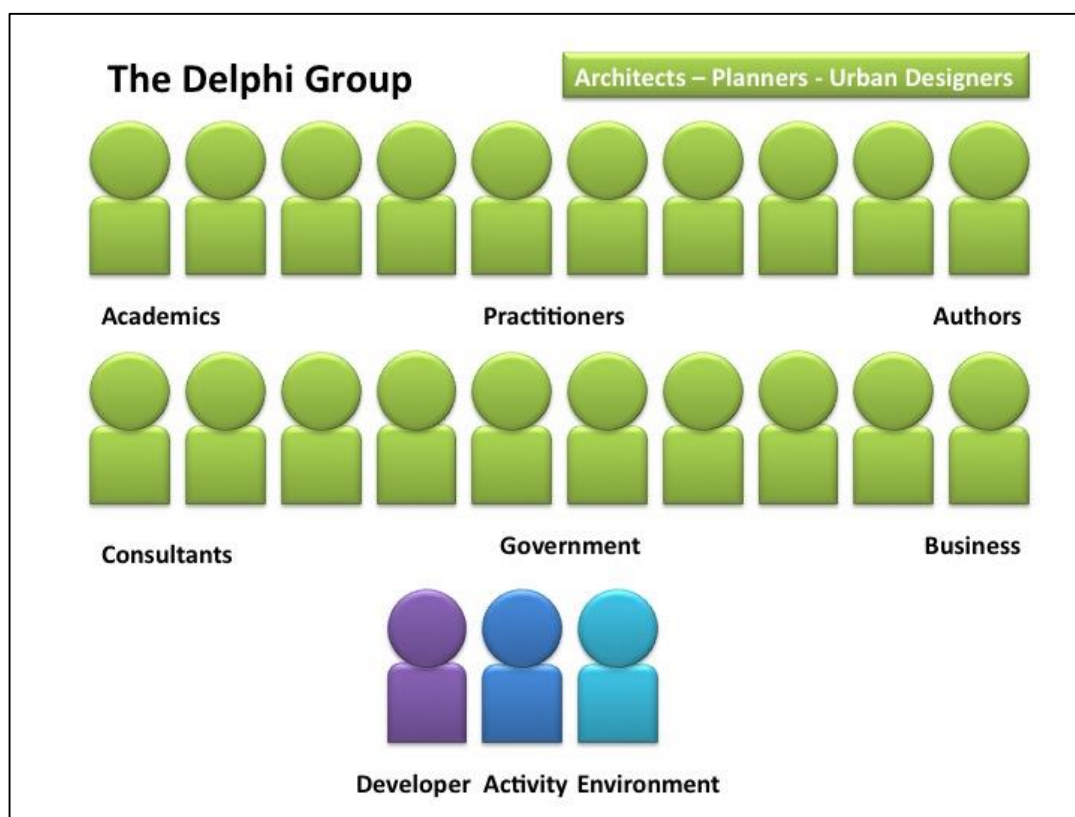


Figure 6.2: The Membership of the Delphi Group (Author 2014)

Many of the participants previously or concurrently held roles in the design, planning, development and governance of urban places. The planning group included people from different fields of planning, academics and people who were dual qualified, as for instance, an architect and planner.

The initial group structure was considered large enough (Linstone and Turoff 2002) to be representative of different viewpoints, professional involvement or profession, and employment status. The composition of the Delphi group recruited to answer the topics of this research comes from often competitive, professional perspectives and although some degree of consensus may arise on particular topics, it was not an expected outcome of the inquiry

Delphi Group Recruitment

Possible members of the Delphi group were identified from the review of the formal and informal literature as having professional, institutional or representative user experience in beach precincts. The Delphi group was recruited to represent academic, government, institutions and organisations, private consultants, advocacy and institutional perspectives with a demonstrated degree of interest in beach precincts. Despite numerous attempts, it was not possible to recruit a lawyer or journalist with experience of the development industry or a surf lifesaving club representative, although a few of the members of the group were or had been members of surf lifesaving clubs.

The members of the group were informed by individual emails of the nature and structure of the research investigation of the urban design of beach precincts on the Gold Coast. They were advised of their role and the maximum time they could be expected to devote to the research. The members were also assured of the confidentiality and anonymity of their participation as well as the completely voluntary nature of their participation and their ability to withdraw from the process at any time (Ethics clearance number RO1303, Appendix D).

The Delphi inquiry was conducted with asynchronous communication by email, allowing for participants to be recruited from different places with different work schedules. The iterative process of conducting the inquiry in rounds also allows the participants to change their opinions and judgements after consideration of the anonymous review/s without fear of losing face or damage to their professional reputation and relationships. The process also allows for the majority and minority opinions to be considered and discussed.

The Structure of the Delphi Group Inquiry

The opinions of the Delphi group were sought in response to questions that emerged from the preceding stages of the case study research (Appendix E). These questions were intended to:

1. reveal the group's opinions of the appropriate spatial layout and land use of urban beach precincts;
2. explore the appropriate urban design for egalitarian public access to activity, amenity and facility;
3. discuss the appropriate nature of the governance of the urban design and planning of beach precinct development; and,
4. consider the urban design and planning measures that would increase the resilience of beach precincts to severe weather events and climate change.

The professional perspectives of the Delphi group members were a feature of the first round of responses. These perspectives included response that focused on development, finances, governance, land and recreational use, environmental, and spatial design. Respondents expressed preferences for the type of activities, amenities and facilities that the beach precinct should offer. Public access and private property rights were discussed in terms of economic or societal benefits and costs. The responses were also conditional on local geomorphology and context of the beach precinct.

In the second round of inquiry, fewer people returned responses than in the first. This may indicate that they generally agreed with initial summary of group opinions, did not feel there was anything they could add or they were unable to participate further in the group for their own reasons. The weights of new opinions expressed in the second round were the following topic areas:

- governance, environment and development;
- preference and priority for the urban design and planning of beach precincts;
- activities, amenities and facilities; and
- criticism of the research.

Of the twenty three Delphi group members who were sent the first round of inquiry, twelve responded with their opinions and elaborations. In the second round eight responded to the summary of the first round sent to them. After the second round was analysed, a second summary of the first round responses was sent to group members. This resulted in only one

response that did not add any new themes or topics to the summary of the second round report to members. The first and second round responses were then considered to have exhausted the commentary from the Delphi group members and the process was concluded with a final report sent to the members (Linstone and Turoff 2002).

The next sections of this chapter will elaborate on the Delphi group responses, the nature of the arguments, the topics raised by the group, the opinions expressed about: governance, development, environments, urban design and planning, amenities and facilities and the social dimensions of beach precincts.

6.2.1 Analysis of the Delphi Group Responses

The analysis of the Delphi group member's responses was organised to reflect the scope and depth of opinion expressed by the group in the two inquiry rounds of the Delphi process. This was in done using Nvivo 9™ in a similar process to that described in section 6.1. The predetermined descriptive codes included housekeeping nodes for the professional status of the respondents, the jurisdiction they represented, the topic questions and the first and second round responses, the nature of the arguments and interesting quotes (Figure 6.2.1).

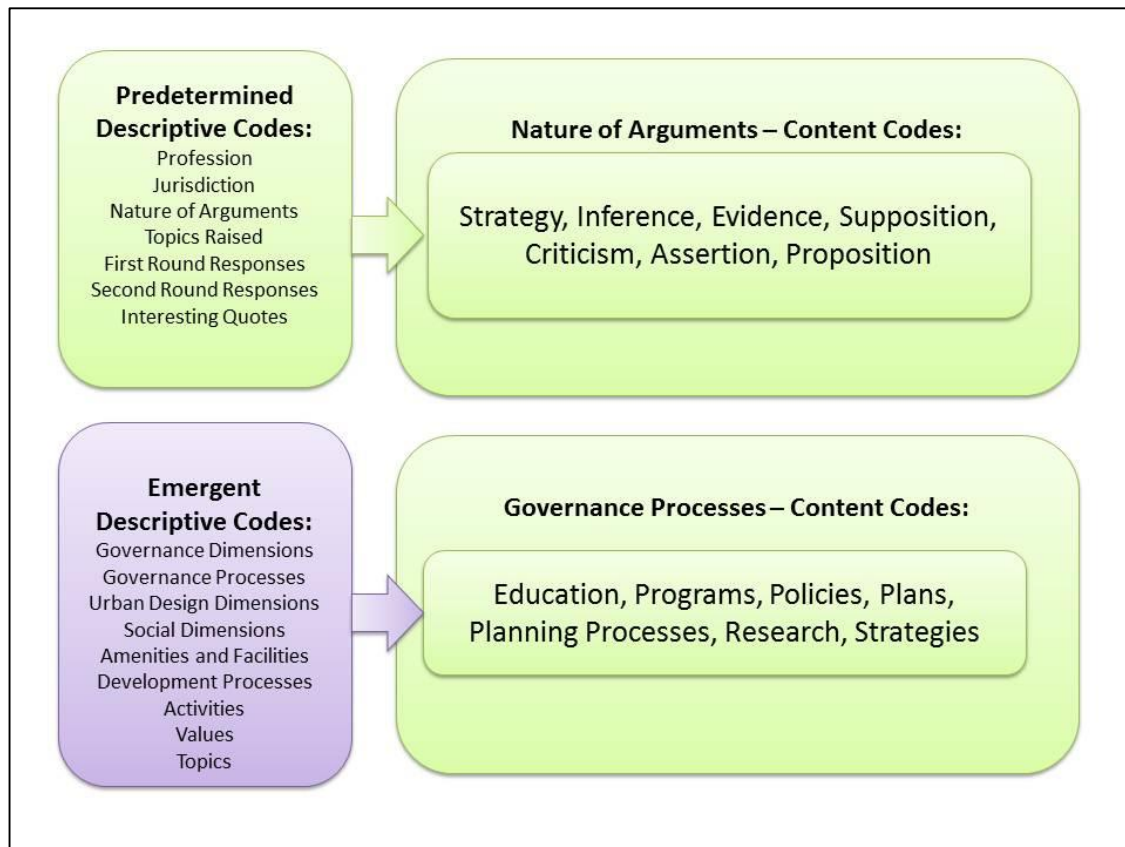


Figure 6.2.1: Descriptive and Content Code Structure of Delphi Group Responses (Author 2013)

The Delphi group responses were also coded from the inherent meanings and arguments found in the text of the first and second round replies which created descriptive codes for governance dimensions, governance processes, urban design dimensions, social dimensions, activities, amenities and facilities, development processes, values and topics.

The predetermined and emergent descriptive codes were then coded for the content of the sentence or paragraph. Unlike the textual analysis of the Oceanway and public access articles, the Delphi group responses did not require three layers of textual analysis of descriptive, theme and content. This is thought to be because the respondents were replying to specific questions and did not diverge from the questions, giving a less elaborate textual structure.

The coding also supplied a structure for reporting the opinions of the Delphi group, both during the reporting process to the group and in this thesis. The nature of the arguments was largely propositional (146) and assertive of a claim (110). The claims that were made are largely assertive without supporting evidence. Respondents also used supposition (27) and inference (11) in the arguments presented in their responses, based on their professional and personal observations (Hart 2007). This is in line with the task given to them, as the Delphi group was asked to contribute their opinions (Henderson, Dudley Evans and Blackhouse 1993).

As well as propositional arguments, Delphi group members also constructed or reported strategies (8 incidences) for dealing with the problems they encountered during the course of their professional work as appropriate to the topics of the research. The group also criticised (29 incidences) both the paradigms and values of governance, urban design, planning and development and aspects of the research design of the Delphi group questions and the responses made by other group members.

The research design was criticised by one respondent as being 'based on the values of white Australians only' and that the 'authentic metaphysical values' of the Bundjalung people should have been included in the study. A respondent thought that Question Four (Appendix E), which is about the cultural values of the beach was 'the wrong question' and thought it should have been about 'economic survival' for 'transportation purposes'. The same respondent disagreed that parking was an 'urban design device' and that amenities are 'more of a planning device'.

Other critical observations were mostly aimed at the values surrounding coastal development not only on the Gold Coast, but globally, with one respondent commenting ‘There is a depressing sameness of coastal development around the world, because they are designed to maximise the dollar return to the developer rather than retain the unique assets of particular areas’. Another respondent criticised the performance-based planning regime of Queensland as it does ‘not necessarily achieve the outcomes that the majority of the community wants’, and suggested a hybrid planning system which had a ‘prescriptive base’ but that also allowed for ‘performance-based alternatives’.

During coding, various topics were prominent in the responses provided. Generally the topics can be characterised as being about governance, urban design and planning, environments, activities and amenities. The frequency of these topics is summarised in Table 6.2.1.

Table 6.2.1: Relative Incidence of the Topic References in the Delphi Group Responses (Author 2012)

Topic	Relative Incidence of the References Made				
	Very Frequent	Frequent	Sometimes	Rarely	Very Rarely
Governance	Regulation and Control (77), Public Access (65), Problems specific to the beach precinct(44),	Benefits (29), Prioritisation (28), Adaptation (27), Conflict (26), Climate change (22)	Costs (19), Compensation (11), Integration (8), Definitions (11)	Change (6), Consultation (6), Population (6), Safety (5)	
Environments	Beach zone (72), Environmental context (55), Coastal process (46)	Nature of the beach (29), Beach engineering (21), Climate change (22)	Conservation (11), Erosion(11), Typology (6)		
Design and Planning	Beach transitional zone (72), Preferences (60) Community (40) Sense of place (37)	Beach culture (27), Personal or professional perspectives (22), Public access rights (19)	Walkability (13), Human scale or needs (13), Opportunity (11)	Motivation (8), Housing (8), Personal Meaning of the beach (7), Change (6), Consultation (6), Street structure (6)	Sensory Perception (4), Historical context (4)
Activities and Amenities			Public transport (13). Surfing (10)	Recreation (8)	Cycling (4)

Brackets indicate recorded incidence of reference to Topic

It is intriguing that so few references were made to activities and amenities in beach precincts. This may reflect the urban planning focus on achieving performance-based values rather than prescriptive values that meet community preferences, which was alluded to in the previous paragraph. The topics raised by the respondents reflect, to some extent, the professional focus

of the Delphi group members by the frequency with which they use particular terms (Glasser and Strauss 1967).

The convergence of meanings signify fields of common opinions with recognisable paradigms of what is valued and what is not (Altheide and Schneider 2013). It is thought to be significant, when examining the frequency of reference, that many of those activities and facilities such as walking and seating, which are so valued by the people using the beach precinct (sections 4.2, 5.4 5.5, 6.1.3), are absent from the content analysis of the professional discourse about the governance, design and planning for activity and amenity of the precincts.

6.3 Delphi Group Preferences for the Governance of Beach Precincts

This section reports on the opinions of the Delphi group regarding the appropriate dimensions and processes of governance to regulate and control public access, urban development and the transition from built to natural environment in beach precincts, in response to the topic questions posed to them in the Delphi process (Appendix E). There was a high degree of interdependence and repetition in the content of the comments between the values of governance, urban design and the environment in the Delphi group responses to the issues of development, public access, climate change resilience, use and activity in the responses of the group.

This thesis identifies the governance of walkability as the most important urban design principle and attribute in the urban design of beach precincts (Sections 3.3 and 4.2). However, it is also recognised that governance is understood as all the processes of governing in various forms and in various levels of jurisdiction (Bevir 2013). For the purposes of this thesis the Delphi group members comments were analysed for their contribution to understanding the dimensions, meanings and values of governance of the public realm and urban development of beach precincts. This analysis will be presented in the following sections and subsections of the chapter.

6.3.1 Dimensions and Meanings of Governance in Beach Precincts

This section examines the Delphi group's preferences of the appropriate governance of beach precincts for different levels of government, in order to balance the interests of the public and private and commercial interests for access to the beach from the beachfront transitional corridor along the beach. This is in the context of suitable forms of development to build resilience to future extreme weather and climate change events.

Governance was broadly discussed by respondents as being about the appropriate level of authority or influence over actions and processes conducted over space and time. These were in different jurisdictions and different levels and branches of government as well as corporate bodies, professional and public associations, individuals and private property owners.

The way that the Delphi group members addressed the questions generated incidences of coding to the public realm (124), private property (74), local government (59), legal issues (50), state government (27) and the commonwealth government (10). From these incidences of coding it can be inferred that the Delphi group members were focused on the public realm of beach precincts, that they saw the local and state levels of government being most associated with governance of that realm and as concerned with legal issues surrounding the interaction of public with private property.

The incidences of governance processes that respondents identified were: research (2), education (6), programs (12), planning processes (64), policies and plans (7) and strategies (124) for beach precincts. From this incidence frequency of coding it can be inferred that, to achieve desired outcomes, the Delphi group members focussed on strategies, policies and plans to be enacted using planning processes and programs. This is not unexpected, as the questions were oriented to the member's areas of expertise and eight of the Delphi group members are professional planners. Low levels of coding referring to research and education indicate that they are less important in their evaluation of governance.

Comments by respondents were often about the role of local, state and commonwealth levels of government and their responsibilities to the public and private property owners. The definitions of legal boundaries of development and public access were central in the discussion. These spanned the economic, environmental, social and cultural benefits and limits of the different spatial zones, from the natural environment of the coast to the built environments inland, and where these zones should physically begin and end.

6.3.2 Governance of Public Access and Development

In considering the way that coastal development affects the degree of public access to the beaches in the Gold Coast, it is important to remember that Queensland has a politically permissive planning regime where economic growth is the default preference for a government that aligns development with progress (England 2004).

A number of respondents indicated that a permissive planning process was not in the interests of the community as a whole, and that development in the beach precinct required prescriptive controls over development, including the nature of the street frontages, building heights and suitable land uses. A respondent proposed a model where, to achieve the needs of society, the planning process should include prescriptive and merit-based elements to achieve the right performance criteria in sustainable developments.

Opinions expressed on Governance for Public Access

The opinions contained in the Delphi group's responses to question two (Appendix E) address the nature of preferred public access associated with the boundaries and limits of development in access form between the built and natural environment, as illustrated and explained in section 6.1.1. Respondents identified a need to clarify the definition of beach access and where the beach begins to include the foredune in government law, plans, policies and programs. This includes a proposal from one group member to restrict private development, 'behind the backdune pushing any public private conflict inland'.

There were clear statements of the primacy of public interest in the ownership of the foredune and for the government to be responsible for the stewardship of the foreshore to facilitate public access to the beach. Public access to, and ownership of, the foreshore/foredune was seen as having a higher value as a public recreational space, rather than a suitable place for development. Beachfront development was seen by most respondents as a very complicated, expensive and an almost intractable governance problem.

The beach precinct was recognised by all Delphi group members as a special case of development that needed different rules for governing development and planning processes when referred to other urban locations. There were many comments that criticised previous development models, in particular, where the location of the line of building permission along the foreshore prevents public access. The foredune was singled out as unsuitable for private property development on environmental, climate change and erosion, public access, amenity and economic liability grounds.

There was emphatic support for a continuous strip of public land to ensure public access that should never be allowed to be developed along the foredune. This was to prevent the effect of incremental, low-level, development where the small, low-impact beach shack can quickly

progress to a multi-million dollar private home, apartment block or billion-dollar resort development, as has happened on the Gold Coast (Ironsides 2012; Cooper and Lemckert 2012).

Opinions expressed on the Governance of Development

The importance of the location and nature of development in beach precincts is considered a pivotal decision in the governance and urban design of beach precincts. As one commentator observed, ‘beach access is dependent on the separation of private property from the foreshore’. There is often a high degree of overlap in the comments made by the group concerning the governance of public access, development, urban design and planning.

For most respondents, development in the principal built form is dependent on an analysis of the condition and context of the natural environment of the beach. There were differing opinions about the appropriate development options for the principal built form. However, it was generally agreed that development should only be permitted where analysis indicates that it is buffered from the effects of extreme weather events or erosion.

A majority of respondents believed that the Gold Coast would benefit economically if it allowed redevelopment of the streets facing the foreshore parklands and along the streets leading to the beach. Suggestions included cafes and restaurants and other commercial ventures supportive of tourism and visitation. Support was given to a proposal to activate or develop retail land use on underused private areas such as car parks, pools and tennis courts which front onto esplanades or beachfronts and are common in the apartments and resorts in the gateway transitional corridor of Gold Coast beach precincts (Sections 4.3.1/4.4.1).

One respondent commented that a ‘healthy economy was dependent on a healthy natural environment and that linkage needed to be recognised by government’. It was also suggested that development in subtropical climates should adopt the principles for subtropical design.

One respondent thought the government should recognise that a growing regional population necessitated that the needs of the general population come before those who live on the beachfront. The reason given was that ownership can change, but that the desire for visitation does not. Yet another respondent suggested that local government had a role to inform and educate the public about past development processes and their implications. It was proposed that modern technologies should be utilised to disseminate information on planning processes proactively and to a wider audience.

A respondent made an interesting observation about the economic processes that act against the viability of long term public access to beaches from the high intensity beachfront development found in Surfers Paradise because: 'the land increases in value excessively over time because of the hold on potential redevelopment'. This respondent favoured a planning regime that would allow increased density of development in a beach precinct and hence its overall economic value, if in turn that development was set further back from the beachfront.

The preferred arrangement of beach precincts was also elaborated on, particularly in reference to types of appropriate commercial development for the buildings opposite the foreshore park. The Delphi group thought that the nature of this commercial edge could either activate or inhibit the foreshore park and the beach precinct. Currumbin was quoted as an example of a development that created vibrant activity on both the commercial and foreshore park side of the street. In Burleigh, the foreshore park was observed as active, but the walled resort development across The Esplanade was seen as a dead space.

Positive qualities of commercial edges to public space were also observed by group members in The Strand, Townsville for its pathways, restaurants and access form spaces, and in Broadbeach and Burleigh for the degree of available access form spaces for activity, amenity and the quality of supportive public infrastructure for extended public stays at the beachfront. Negative qualities were commented upon for Mermaid Beach and other beaches on the Gold Coast with their characteristic beachfront development of homes that prevent people walking along the coast on pathways through the foredunes.

The responses of the Delphi group members identified possible criteria for development controls and processes that reflected the criticisms of past developments and sought to avoid creating future problems. One respondent observed that developers needed a degree of certainty and opportunity for investment in beach precincts as part of their decision making process.

It was explained that the shape and size of the land plot in the beach precinct is very important in determining the approach taken by the developer. If the developer has a narrow strip of land, parallel to the beach, they are under pressure to intensively develop the beachfront as the principal built form and keep the access to the beach as private as permissible. If they hold a larger deeper plot adjacent to the beach then they can maximise their returns differently.

It was also proposed that the alignment of development to the public recreational space of the foreshore allows the developer to maximise the number and quality of open views to the water from the beach precinct with higher densities inland. This type of higher intensity development was seen as conditional on the area being ‘amalgamated into a project and the beachfront returned to public ownership as open space’.

The group members confirmed a first round proposal for the governance of beach precincts as part of a Coastal National Park in the second round of inquiry. The group considered that the commonwealth was the appropriate level of government to control and regulate coastal development, as it is almost impossible to get agreement between the states, particularly on planning and development issues. This proposal was seen to improve the situation for all involved, including developers, if there were only one set of rules across the country. This was seen as relevant to the Gold Coast where the state border can complicate planning and development (Zeppel 2011).

6.3.3 Building Resilience to Extreme Weather Events and Climate Change

The comments made by respondents in the Delphi group process confirm the nature of the gateway and beachfront transitional corridors as vitally important in both the governance and design of beach precincts. The beachfront transitional corridor is seen as a buffer zone with contending public access, recreational and natural values. Members thought that prescriptive development controls need to be established from the wet beach to the first place that the built environment can reasonably be expected to be safe from natural processes in the foreseeable future.

The Delphi group emphasised that prescriptive control on development in a buffer zone is particularly important. With changes to ocean currents and sea level rises expected in the coming years, consideration should be given to the resilience of current and future urban beach precincts to extreme weather and climate change events (Queensland Government 2008a). It is noted that this type of prescriptive control of coastal development zones already exists in the Ley de Costas (1988) legislation in Spain.

The legacy of previously permitted development was recognised in creating the ongoing public liability for the defence of a building line, established before sea level rise and climate change processes of inundation and erosion was widely recognised by governments. Many of the Delphi group thought that the building line may need to be moved due to these natural

processes and respondents commented on the difficulties this would create. A suggestion was made that, in future coastal subdivisions, beach precinct property could be leased out by the government rather than be sold freehold. This would give government the option of either buying back the lease or allowing it to expire.

The buffer zone between the wet beach and the principal built form is not seen as suitable for private ownership or permanent private structures, but a space that would be best served by commonwealth planning controls, possibly based on the public trust doctrine (Klass and Huang 2009). The buffer zone approximately corresponds to the area identified as important for the degree of public access in the thesis (Section 6.1.1). However, the actual boundaries of the buffer zone would need to be established by survey and analysis of a range of geographic, geological and morphological factors including climactic and oceanographic trends.

A commonwealth coordinated program was the preferred option to regulate coastal zone resilience to climate change, since shorelines cross jurisdictional boundaries and engineering solutions in one state can affect the neighbouring state. For example, a Delphi group member observed that the Tweed River training walls of the neighbouring state of New South Wales have, and continue to have, consequences for the Gold Coast (Griffith University Centre for Coastal Management 2012).

The preferred option of the Delphi group for commonwealth oversight, responsibility and control of coastal was seen to be complicated by the Australian constitutional separation of powers for land development between commonwealth and state governments. It was observed that this would need to be addressed in any change of governance over beach precinct development. One solution proposed was for a body constituted to represent state interests acting in partnership. Some respondents saw all levels of government as bearing responsibility for the liabilities and associated risks generated by the current situation of beachfront development.

A Delphi group member was of the opinion that governments at commonwealth, state and local levels would be expected to facilitate community understanding of the planning controls, mitigation and adaptation policies adopted to improve local responses to climate change and extreme weather events. Another commented that a high degree of transparency and stability of these policies would be necessary to provide consistency for developers and the communities affected by them.

Amendments to the law would be necessary, particularly for Queensland with its injurious affection liabilities for compensation to private beachfront property owners who suffer market value loss due to changes in planning schemes and policies. It was also thought that changes to the Sustainable Planning Act (Queensland State Government 2010) and the Queensland Coastal Plan (Department of Environment and Resource Management 2011) were necessary to more effectively protect public access rights and prevent new development, or intensification of existing development, on the foreshore .

In Queensland ‘injurious affectation’ is a legal process of compensating private property owners for any calculated losses that arise when planning schemes or policies retrospectively affect development rights. This in turn inhibits the decision making processes of local government, restricting their ability to change plans and policies for fear of substantial compensation claims from property owners (Giskes 2004). Respondents identified that making necessary changes to beach precinct planning and policies, especially for beachfront property, would be very unlikely in Queensland because of the financial costs of doing so.

Property owners have a right in Queensland to apply for compensation for decreases in value whenever actions by government physically damage their land, limit the owner’s activities or use, interfere with the amenity or character of the property, deter purchasers of the property, or increase the expenses of the landowner (Giskes 2004).

This right to compensation continues under division 4, part 3 of the Sustainable Planning Act 2009 (Queensland State Government 2010). A respondent noted that continuing private investment that intensifies the value of beachfront properties in part relies on this compensation feature of the current legislation in Queensland to prevent the council limiting development for fear of the ensuing compensation claim.

An important limitation on the available options for action was seen by the Delphi group as the fear of the punishing costs that would likely arise from injurious affection paid to the property owners (Giskes 2004) and the probable reaction of tax and ratepayers to those costs affecting the re-election chances of local politicians, who would be seen as responsible for those costs by sections of their electorate.

If the proposed buffer zone of the Gold Coast were to be reassessed for changes to planning permission, it was expected that application for compensation would follow from the thousands of Gold Coast beachfront property owners who have already shown a propensity

for litigation (Potts 2011). This aversion for court cases was indicated by the Delphi group members as probably affecting much of the decision making processes of planners and councillors on the Gold Coast. It also restricts the range of rational responses to the conflicts and challenges facing those decision makers in matters such as climate change adaptation at local, state and commonwealth levels of government.

The nature of prescriptive legislation was also seen as problematic, as it said to lead to a lack of variety and innovation. It was suggested that a possible improvement might be a hybrid planning system that had a prescriptive intent (primacy of public access), allowing for performance-based alternatives that did not compromise the prescriptive intent.

There was also a proposition from a group member in the first round of inquiry for the management of properties that were identified as inappropriately sited on the coastline and at risk to extreme weather and climate change events. This would be an accordant principle, similar to the one being employed in the European Union for financial recovery. The owners of the identified properties would receive a temporary offer to release their rights as owners in exchange for cover under the government's umbrella of resilience measures, or be subject to the forces of nature.

In the second round of inquiry, the same Delphi group member suggested that: 'Coastal settlements should be considered temporary settlements and designed as such'. It was proposed that private ownership could be replaced with co-operative ownership of an entire coastal community to manage the issues of loss of land and/or income.

As an alternative solution, it was suggested that existing private development could be offered a temporary opportunity to take part in a communal resilience and development policy or face being excluded from any later compensation or protection programs. This approach was seen as essential as the potential costs to the state are beyond the financial capability of any government to provide.

Beach engineering solutions to erosion problems were seen as a measure of last resort by the Delphi group. They should only be undertaken with care as unintended consequences or poorly conceived, rushed or uninformed design could have disastrous consequences. Where it was established as necessary, sea walls or beach engineering solutions were seen as permissible. Regular beach access entries were considered desirable as was some provision for disabled access in beach precincts where it is practical.

Members of the Delphi group expressed an opinion that the whole geographical area affected by the engineering solution would need to be considered, not just the location of the engineering works. The group also thought that coastal settlement needs flexible development controls and engineering solutions to allow for adaptation to environmental changes. These should principally follow 'soft approaches' such as artificial islands, instead of seawalls or other 'hard engineering'.

The use of soft policies and programs to conserve and restore beachfronts, reducing erosion and buffering the intrusion of development, was also commented on as a strategy to both educate and improve understanding amongst the public about coastal issues. Examples of programs which could be encouraged or expanded to improve the public awareness of dune care and health are such groups such as Coast Ed, Coast Care and the Clean-up Australia programs.

The foredune was seen as part of the natural barrier system in the role of protecting inland built development. This is also true of natural features such as headlands that can be used for their protective properties for residential development on their windward sides. The open space created by preventing development on foredunes was seen as a natural public recreational space and the location for public facilities for the beach precinct. Maximising the number and quality of open views from the beach precinct was also seen as having economic and social value in the design of beach precincts.

Several members of the Delphi group expressed the opinion that existing, privately-owned beachfront development is putting economic and political pressure on local councils. Local government, in particular, is in the position of having to pay for beach protection and replenishment because there is no buffer zone that allows the natural process of build-up and depletion of dunes.

For example, on the Gold Coast, recent erosion events have raised calls for the expenditure of \$57 million for engineering works (Westhorp 2012). At the same time the state government has exercised its rights in state planning laws to approve a billion dollar beachfront development which further increase the liability of tax and ratepayers in the event of a future severe weather event (Ironsides 2012).

One group member also observed that current beachfront property owners would suffer a significant devaluation of their property values if an adaptation plan involved buyback, or

lose support for beach protection measures. It was thought that there would be an outcry and the plan would be challenged in court. It was also observed that current erosion issues may do the work of devaluing beachfront properties as the market recognised their vulnerability.

In responding to the immediate threats, suggestions included increasing building setbacks from the dunes, sacrificial structures and revegetation of dunes, sea walls, converting beachfront property from freehold to leasehold, beach maintenance and restoration rates levies, accepting loss of property without the right to rebuild. Other strategies suggested were learning the lessons from other jurisdictions and events and applying them if appropriate.

Another respondent observed that the regulatory framework should be aligned with nature rather than fighting climate change, erosion and sea level rise, as it was part of an inevitable and ongoing reshaping of the planet's surface. The regulatory process should also include monitoring change and informing the public of the changes.

6.4 Delphi Group Preferences for the Urban Design of Beach Precincts

This section reports on the opinions of the members of a Delphi group; for the appropriate attributes, characteristics and values for the governance of the different typological elements of the urban design of the public realm of beach precincts, in response to the topic questions (Appendix E). The subsequent subsections will report the opinions of the Delphi group associated with the identified values that influence urban design solutions for beach precincts, beach culture; conflict over public space and the preferences for facility, activity and amenity.

The respondents were mostly interested in the spatial relationships of access to the beach, access pathways, recreational and adjacent built forms. The group was also concerned with the arrangement of the amenities and facilities in the beach precinct and the design of the transit corridors and pathways through the built and recreational forms to the beach. The preferences expressed for particular spatial relationships related to activity, facility and amenity would appear to be the defining urban design values held by urban design and planning professionals for beach precinct design solutions.

The Delphi group indicated that design solutions were dependent on associated governance values in terms of what to do with public space to meet particular needs for accessibility, activity, amenity and use. Or, as one commentator observed: 'spatially and in a landuse sense, part of the design values would always be preserved by maintaining the outlook, the view lines and the context'.

The group considered that some urban design values are dependent on the political decisions made in the governance process, possessing appropriate cultural values to allow temporary and commercial uses of public space. One commentator observed: ‘Overseas urban design in beach precincts seems more progressive in places like Spain with its foreshores and activation, artwork and diversity. They allow for more interactive uses such as the chiringuitos [beach bars] in Barcelona’.

The Delphi group members also reported on their preferences for the attributes and characteristics of the urban design of an ideal beach precinct which allowed the public access to the benefits of the precinct.

The typological preferences for activity, amenity and use

The typology developed for the thesis (section 2.2) was used and referenced in the responses received. Delphi group members expressed a preference for the access form to include the foredune. The comments affirmed the typology used in the research and, in some cases, elaborated on the spatial arrangement and land uses of the typological attributes of a beach precinct. A summary of these elaborations follows.

Spatial arrangement and land use of the beach precinct should reflect current knowledge of the changes inherent in the natural environment and climate to respect the forces of nature. The buffer zone from the wet zone to the backdune is the key to the beach precinct built environment. Delphi group members were in agreement that the line of permission for the built environment should only begin where it is analysed as safe to do so.

The recreational or access form was described as the most important attribute of the beach precinct and respondents thought that it should dominate the allocation of space in the beach precinct. Social and commercial nodes within the recreational form that were tied in with the transit corridor were also considered very desirable.

The group thought that the diversity of type, distribution and frequency of the social nodes were important to the success of the design of the recreational or access form. A number of respondents thought that land uses should be fine grained and diverse, with small-scale café/retail nodes on the edge of the principal built form adjoining the recreational access form and accessible to transit.

Some members thought that the transit corridors should not always be located at a distance and parallel to the beach but come within walkable distance and, where possible, closer to the traverse pathway to touch the access form at significant places for recreational and social activity. Respondents also indicated that frequent transect pathways at right angles to the beachfront through the principal built form were needed to facilitate amenity and connection to the transit corridor.

The members supported a walkable environment with views to the water, frequent, safe attractive pathways and social and recreational amenities and facilities dominating the design of the foreshore parks. The group advised that although public access to the beach was an essential component of the spatial layout and urban design of beach precincts, it should utilise environmentally sensitive methods, such as elevated boardwalks, wherever possible in the transitional access corridors.

The preferred spatial relationships of the forms and corridors in the beach precinct design were all concerned with the spatial orientation and arrangement of the built environment to the beach and natural environment. The integration of education, art and culture in the design solution aligned to a local context was a preferred option of some respondents. Members also wanted the design of the beach precinct to be adaptable to climate change and cultural influences, with the inclusion of multi-use or event spaces favoured.

Desirable attributes and characteristics of the design solutions for beach precincts

The Delphi groups suggested a number of the desirable attributes and characteristics of the design solutions of beach precincts. The frequency with which urban design attributes and characteristics such as access form and proximity are referenced (Table 6.4) is taken to indicate the degree of importance assigned to them by the Delphi group members (Altheide and Schneider 2013).

The relative frequency of references was reported to the members after the first round analysis and comment was sought on the implications of the incidence of urban design references. For the Delphi group members who responded, the frequency was interpreted as supporting a walkable and human scale of development with well-detailed facilities balancing privacy and public utility. The members thought the design of the built environment needed a light touch of environmentally responsive design that was not over-engineered and responded to the spatial relationships of the typology to the local climate, context and character.

Table 6.4: Relative Frequency of the Urban Design References from the Delphi Group (Author 2012)

Frequency of Reference	Urban Design References <i>Recorded Incidence of Reference to Topic in Brackets</i>
Very Frequently	Access Form (77), Beach Frontage (73), Principal Built Form, (61), Spatial Relationship to the Beach (60)
Frequently	Natural Features (42), Land Use (40), Spatial Arrangements (27)
Sometimes	Context (17), Proximity (16), Boundaries (16), Pathways (15), Topography 15, Views (14), Permeability (14), Diversity (13), Transit Corridor (11)
Rarely	Size (8), Scale (8), Aesthetics (7), Barriers (6)
Very rarely	Nodes and Disabled Access (4 each)

In order to achieve the desirable attributes and characteristics of beach precincts, the public trust doctrine was suggested as a guiding principle for the governance of design solutions to maintaining public access to the beach and ocean. An emphasis was placed on the responsibilities of elected and publicly appointed officials to represent the public interest through a visible, accountable and transparent process.

In addressing contemporary planning practices that influence the articulation of values into design solutions for places, a Delphi group member advocated the master planning of all beachfront precincts using the inquiry by design workshops to manage outcomes for developers, community, state and local government, along with form-based design codes for beachfront development precincts.

Another respondent considered master planning to be a failed method of organising urban spaces. This respondent observed that master planning is based on the ideas contained in the Charter of Athens sponsored by Le Corbusier and the Fourth Congress of Modern Architects (CIAM 1946). The main criticism by the respondent of this approach is that it prescribes, in detail, the future of a place and wipes away the past to create an idealised future without a researched understanding of its social and cultural effects. In the opinion of the respondent, although it espouses environmental aims, it creates, ironically, a highly artificial urban form.

This leads on to a consideration of the different values that members of the Delphi group thought should be prioritised in the application and interpretation of the urban design

attributes and characteristics they believed to be important. The next section examines the opinions of the group on the historical and contemporary values that influence urban design and the design solutions which were preferred, or suggested, in accordance with the values they thought were significant for appropriate design solutions for beach precincts.

6.4.1 Values Which Influence the Urban Design of Beach Precincts

There were elements in the initial questions posed to the Delphi group members (Appendix E) that intended to inquire into the group's perception of the dominance or priority that cultural, economic, environmental or social values had in the urban design, planning and development of beach precincts.

The content analysis of the Delphi group submissions revealed the dominant values in the responses to be concerned with different combinations of design, governance, cultural and social, environmental and economic values. The comments on cultural values could not be simply summarised, as opinions expressed by the Delphi group were too diverse. The only consistent opinion on cultural values was the universality of the public attraction to beaches and beachfronts.

The social values commented on by the group also concentrated on the public right of access to the beach and the design of the foreshore spaces of the beach precincts to meet the preferred activities of all beach precinct visitors. This included those who just want to be by the beach without going onto the sand or into the water. Delphi group respondents also wanted the design of beach precincts to enable the activation of egalitarian and democratic values of public space access to encourage diversity in the communities, activities and opportunities available to residents, visitors and tourists.

The majority of responses considered that economic values were historically dominant in the decision making processes of the governance of beach precincts. A respondent observed that it was the primacy of economic values that actually damaged the economic potential of the beach precincts.

One group member remarked that the established political and judicial framework of western countries, particularly in the USA, Australia and New Zealand, are oriented to the *laissez-faire* market economies dominant in these countries for much of the last sixty years. This economic orientation assumes the primacy of private property and economic values over

social, cultural and environmental values. They also tend to be self-reinforcing values that tend to endure in the development of settlements.

An alternative to this view saw environmental values as being dominant in current urban design, planning and development decisions. These environmental values were seen as partly a response to the reaction to climate change. It was observed that the environmental, social and cultural costs of the dominant economic values and the conflict of values have come into sharp focus along the coast where the natural and built environments are adjacent.

A number of replies to the questions were focused on the value of natural features such as creeks and headlands in the urban design of beach precincts. The proximity of other coastal features such as ports or marinas and the presence of commercial, airports, fishing or industrial activities neighbouring the beach precinct were also mentioned, as were aesthetic, historical, environmental, social, cultural and community values.

Some group members also observed that the key natural features and the intrinsic values of place, aesthetics and setting or context were the initial attraction that led to the development. If these values of the environment were not respected in the development then they could be devalued or 'loved to death' by insensitive development which destroyed the initial attractive values. Several respondents wanted to see beach precincts reflect local context and character in order to provide a 'sense of place' along otherwise undifferentiated coastal development.

The type of insensitive development found in many places around the world along the coast was seen as being caused by a pervasive ability of developers to over-influence the development process at the expense of the environmental qualities that first encouraged the development.

Developers were seen to influence the development process by monopolising the beach frontage in one of two ways. This could be done either by building on it and reducing the access and visitation value of the public, or by building apartments and resorts that dominate the foreshore parklands. Many Delphi group members believed that this privately oriented and focused development did not contribute to the public visitation amenity. As a type of development, it was also seen as negatively affecting the environmental and social sense of place that is so important in attracting use and activity.

Economic value was proposed to derive from establishing environmental values. This in turn would produce the urban design brief and development guidelines allowing the developer to

respect the dominant environmental values of the particular beach precinct being developed. This would subsequently produce a sustainable development that could be adaptive to change.

Commentators also raised issues that affected their perception of value in the urban design and planning of beach precincts. These are summarised as:

- including people's respectful connection to nature in the urban design and planning process;
- including long-term environmental costs in the assessment of the financial viability of beachfront development;
- including the sustainability of local flora and fauna in the development of the beach precinct;
- retaining natural features such as national parks, headlands and estuaries adjoining development as environmental and aesthetic assets of the community;
- the inadequacy of current statutory instruments in delivering environmentally sensitive development, and
- the extension of private property rights by a process of nimbyism onto publicly owned dunes, beaches and adjoining development.

Other comments were received that dealt with the options for dealing with conflicting values. One group member considered the car-dominated sprawl development, common to Australia and other countries, is a social, economic and environmental issue that impacts both on the need for further beachfront development and on the use of existing beach precincts.

Another group member noted the need to acknowledge the natural features of the local environment and their emotional and cultural place in creating values that derive from the social, physical and mental benefits of a place. These were said to lead to the creation of a sense of identity and place for communities. There was also recognition that the processes of site development are related to real estate values which in turn derive from social and cultural preferences that are not wholly economic.

The second round of inquiry saw group members make a few more suggestions for the desirable characteristics of an urban beach precinct. These are summarised as follows:

- The beach precinct needs to be designed with a capability to evolve and adapt to the needs of future generations. Some suggestions to achieve this included relatively short lifespan buildings made from natural materials; connection to the beach via timber walkways; buildings made of biodegradable materials with green roofs that blend into the landscape rather than dominating it.
- Involving the local Aboriginal groups to consult in the design of the precinct to achieve a spiritual connection to the legacy of place.
- Adopting human scale and walkability as priority design elements in the beach precincts.

We now move on to consider the opinions of the Delphi group on the influence that beach culture may have on the urban design of beach precincts.

6.4.2 Opinions about Beach Culture

The Delphi group members were asked to express their views on the spiritual, symbolic and cultural values of Australian and other countries' cultural relationship with the beach and if they thought there was anything that could distinguish an Australian beach culture. The group was also asked to give opinions on the causes of conflict in beach precincts and how design and planning affects that conflict. They were invited to contribute their views on how culture and conflict over the beach precincts could be incorporated into the urban design and planning of beach precincts.

The initial responses indicated conflicting views as to what constituted a beach culture, but generally agreed on its existence as part of the symbolic and cultural landscape of communities who lived close to the sea. A member observed that, as much as it may be difficult to see the actual reality of a cultural phenomenon, its various forms of existence can be perceived by their effects even though they have divergent meaning.

Some respondents thought that Australia had a strong beach culture, although some thought elements associated with that culture are overstated in relation to how Australians view themselves and the world. Australian beach and surf culture were, to some degree, considered to be mythical social constructs and to not reflect the reality of the Australian beach cultural experience. The symbolism of the Surf Life Saving Clubs was given as an example of an overstated cultural influence with more myth than substance.

Beach culture was identified as playing a part in the construction of a particular cultural imagery that could be recognised as Australian. However, none of those cultural elements were thought to be unique to Australia. Some respondents said that Australians would not tolerate privatisation of beach precincts. Others recognised that there are some urban beaches in Australian beachfront development where it is difficult to access and stay at the beach.

A number of group members were looking for the local context and character to be incorporated into the design to differentiate places as reflective of local beach culture and appropriate to its values. The symbolically egalitarian public access features were considered important for Australian beach precincts and supportive of democratic ideals in Australia and elsewhere. A member expressed the opinion that the inspirational qualities of the largely mythical Australian beach culture were seen as important in attracting people to volunteer for beach patrols and join their local surf lifesaving clubs as it was seen as a commendable thing to do in the contemporary cultural context.

Many of the group responses considered the communities who live closest to the coast attached the greatest degree of cultural attachment and meaning to the coast. Much of this meaning and attachment was considered to be related to functional, recreational and historical uses. Most respondents associated the right of public access to the beach as a cultural imperative to activate the associated cultural benefits. The nature of the local beach cultures was seen as reflecting the dominant local uses. Some examples were given of the Mediterranean as a sailing, fishing, diving local culture and Californian as a surfing, sun-loving and spiritual local culture.

One respondent drew attention to the cultural values associated with the Balinese belief system that sees the ocean as a place for the dead and evil spirits and the mountain in the centre of the island as being holy. This affects the design of coastal villages that have temples to the good spirits on the mountainside of the village and temples for the bad spirits on the ocean side. However, this local cultural approach to the urban design of beach settlements has been displaced by the introduction of tourism, which has introduced a form of development that is oriented to the ocean and designed to attract foreign tourism and investment.

A few group members chose to contribute differing perspectives on this topic in the second round and they are summarised as the spiritual cultural dimension associated with beach precincts. One respondent thought this dimension was largely non-existent for Australians although they thought it existed amongst Indigenous or Aboriginal groups. Another group

member thought that the concept of the Australian beach culture is itself a cultural concept derived from superficial imagery of the tourism industry and the concept of a beach culture needs to be defined.

One member thought that there was a perceived need to change the cultural paradigm of the beach culture to include the philological meaning of the word *culture*, that is ‘caring’, to build an altruistic aspect to the mainstream attributes of beach culture beyond surfing and sun bathing. Another group member considered the design and planning of a beach precinct should contain environmentally friendly, cultural aspects that would be clearly visible in the built form and that the environment needs to be treated with respect, as the basis of life and these values should be encoded into the design brief of the beach precinct.

6.4.3 Conflict over Public Space

The initial responses identified the natural environment, natural features and the transition from the natural to the built environment as areas of interest to the Delphi group. This beachfront transitional space is also of particular interest to the research, as it seen as the location for a high degree of conflict in the values that people bring to its appropriate uses and activities and associated urban design, planning and development (Sections 4.5/5.5).

The potential for conflict was seen by members as arising from the different expectations and preferences in public space use amongst individuals, groups and communities. This was seen to be especially true in desirable and growth areas. Age, cultural preference, purpose of visit and gender were also seen as contributing to conflicts amongst people in proximity. Several members identified conflicts between pedestrians, cyclists and joggers on narrow and busy pathways along the beach as well as beachfront property owners contesting the use of public foreshore spaces adjacent to their homes.

The differential speeds of cycling and walking and the shared use of pathways were seen as causes of conflict along the Oceanway as it is ‘often crowded to the point that people cannot fully enjoy it for fear of collision’ and that it ‘needed to change from lineal to meandering’ and have ‘planter boxes and vegetation to provide alternative sides and spaces for people to sit and interact’. Separate routes or passive speed controls were also suggested as improvements for the current design of the Oceanway (see section 5.5).

Delphi group members had varied views and strategies for governing conflict in the transitional corridors and public spaces of the beach precinct. One respondent thought that

there are no problems with competing groups claiming the spaces in beach precincts; others expressed concern over conflicts between different user groups, especially in crowded social spaces like foreshore parklands. These concerns centred on the reduction of enjoyment that some members of the community experience in using and visiting the beach precinct.

The strategies proposed to manage or mitigate conflict included physically removing the source of the conflict, for example by reclaiming the foreshore from private development to activate it as public space. Some of the other strategies proposed for beach precinct development and redevelopment included:

- reviewing the problems of the past and using public private partnerships to evolve new solutions;
- masterplanning coordinated prescriptive and criteria based redevelopment of beach precincts to include a high concentration of diverse nodes of different types to meet the identified criteria;
- detailed place-by-place suggestions for different beach precincts along the coast tailored to meet different social, commercial and cultural objectives for the different groups in society;
- utilising technologies to allow temporary or programmable spaces or concessions to respond to different user groups at different times of the day and year;
- using a futures methodology to anticipate emerging issues, map cultural changes, identify causes, suggest alternatives and transform the beach precincts through action learning processes, and
- communicating with the user and interest groups in beach precincts and the community with a process of education or dissemination of the problems of the past to involve the community in changing their own environments.

The Gold Coast Council was reported by some in the Delphi group as responding to the competition for general public spaces for picnicking, sitting and talking by providing nodes that generally have park furniture, bins, water bubblers and sometimes barbeques and toilets at regular intervals along the foreshore park. We now move on to consider the Delphi group preferences for activities, amenities and facilities in beach precincts.

6.4.4 Preferences for Activities, Amenities and Facilities in Beach Precincts

The Delphi group was asked what changes to planning and development practices they thought would be needed to improve decision making for healthy living, recreational opportunity and lifestyle choice in beach precincts amongst the competing interest groups. This question was asked to explore the nature of the management of beach precincts through the provision of activities, amenities, and facilities (Appendix E).

Activities

There was little comment on beach precinct activities, except to mention the economic effect of the location of boat launch facilities and jetties for recreational fishers and divers as being important in some localities. Indeed, activities were usually referred to as recreation and often mentioned as a value of place alongside, and in conjunction with, development that was associated with natural or environmental features.

The order of coding to reference gives some insight into the lack of fine detail in the Delphi group responses. The group referred to recreation (16), surfing (10), and cycling (4) alongside one reference each for beach volleyball, diving, fishing and water sports. Surfing received the most references of any single activity and these references were often detailed with cultural, social and environmental references. Considering that surfing was observed very much as a minority activity during field observations (section 5.3), it can be seen that surfing and surf-life saving are disproportionately influential in the narrative of beach precincts amongst the members of the Delphi group.

Interestingly, two comments made by a Delphi group member - ‘a sheltered bay in the lee of the wind enables the swell to wrap around the point’ and ‘the impact of localism in certain areas, pecking order and surf protocols which create a sense of order through tribalism in the water’ suggest that not only is the natural environment more important than urban design and planning for surfing as an activity, but that surfing is actually self-regulated by the participants. Indeed, the only requirement of planning and design that the participants require of the city council is to maintain a natural environment free from development. This was recently evidenced by surfer resistance to proposals to develop a cruise ship terminal at Bilinga on the southern Gold Coast shore (Australian Broadcasting Corporation 2014).

It would appear to be significant that there was no reference by the Delphi group to the activities of walking, pushing a pram, jogging or tourism and passive activities such as

viewing that were found to be significant activities in the field observations (section 5.2). There were also significant public preferences for these activities in the questionnaire responses (section 5.4.3) and the Oceanway and public access articles content analyses (section 6.1).

This lack of detail of place and associated activity in the responses of the Delphi group may indicate a cognitive dissonance between professionals and the public in their understanding of the appropriate activities and facilities for the recreational spaces they help to plan, design and maintain. This may be due to the economic and development focus of their practices or lack of knowledge about how different places are actually used by the public.

It was observed by one member that there is an increased need for activity spaces due to an increase in leisure time. Foreshore parks were observed as sometimes becoming too crowded for some activities that took up large spaces. The foreshore parks were commented on as being the appropriate setting for many potential activities but, as it was virtually impossible to increase the amount of this type of amenity, it should be carefully managed.

This was further emphasised in the second round of the Delphi process with the comment that there should be spaces for activity proportional to the community's actual needs of those spaces. However, there were no suggestions of what these needs were or how to meet them.

Amenities and Facilities

The Delphi group respondents largely agreed with the suggestion that the amenities and facilities provided should support the public use of the beach precinct and that development of the beach precinct needed to be controlled. They group also expressed the opinion that amenities and facilities should be provided for all socio-economic groups of society.

Some of the most frequently referenced amenities and facilities included the beach frontage, foreshore park, activity or event space, parking and open spaces (Table 6.4.4). All of these amenities are typically present in or near the beachfront transitional corridor of the foreshore park and enhance public access to the beach, with the possible exception of parking. However, the Gold Coast foreshore park space often incorporates car parks or parking spaces.

In the second round a member observed that the frequency of mention would probably be accurate in terms of what was talked about by professionals. However, they thought that the public would perceive landscaping, toilets, playgrounds, and seating, which were shown in

the ‘rarely’ referenced category, as more important than amenities such as concessions, public art, public transport stops and resorts, shown in the ‘sometimes’ referenced category.

Table 6.4.4: Frequency of Amenity and Facility References in the Delphi Group Responses (Author 2012)

Frequency of Reference	Amenity and Facility References
	<i>Recorded Incidence of Reference to Topic in Brackets</i>
Very Frequently	Beachfront (92), Commercial (31)
Frequently	Foreshore Park (16), Pathways (15), Views (14), Activity or Event Space (14), Parking (12), Open Spaces (10)
Sometimes	Esplanade (8), Restaurants and Cafes (7), Walking and Cycling Pathways (7), Shade and Shelter (6), Beach Access Points (6), Public Art (5) , Public Transport Stops (5)
Rarely	Concessions (4), Resorts (4), Toilets (3), Boat Ramp (2), Plantings (2), Caravan Parks (2), Life Guard Facilities (2), Children’s Playground (2), Covered Bench Tables (2)
Very rarely	Single reference for: Picnic Areas, Barbeque Facilities, Historical Signage, Licenced Premises, Life Guard Facilities, Landscaping, Shops and Offices, Showers, Swimming Pools, Harbours.

It is possible to discern a generalised design preference for the public spaces of beach precincts from the focus implied by the coding frequency, as the group responses are focused on the beachfront transitional corridor, with a preferred form of foreshore park or esplanade for the land adjacent to the beachfront.

The Delphi group also appears to envisage movement pathways from parking and public transport stops to beach access points. Views to the beach are considered an important amenity, both along the foreshore and from the built form, and there is some opposition to obstructing those views to the ocean with dunal plantings and buildings.

The Delphi group frequently mentioned commercial activities to promote economic activity and provide private supportive infrastructure for visitation and a diversity of uses in the beach precinct. This would be complemented with appropriate public infrastructure and the maintenance of public spaces and facilities such as open spaces which could be used for a variety of purposes - shade and shelter, toilets, lifeguard facilities and showers for the safety and health of the visitors. Finally, the Delphi group gave some consideration to the category

of facilities that support specific activities such as public art, children's playgrounds, picnic and barbeque areas, historical signage and harbours (see section 5.4.3).

Several members gave particular attention to linear foreshore parks and their unimaginative public open space design which does nothing but allow walking or cycling. As one member commented, when referring to places where resorts line the road across from the foreshore parks: 'Zoning changes could create active frontages to these properties and offer meeting places like cafes, services and street scaping that would lift the public realm in front of the properties. What was now considered a 'waste of public space, made up of a standard grass verge and a narrow concrete footpath – could become a vibrant collection of spaces and activities that would connect the public parkland across the street to the commercial activities, rather than the current situation where the road becomes a barrier between the perceived public and private realms'.

There was also a group of coding references from the Delphi group that addresses the use of the beach precinct for passive or tourist activities with an emphasis on landscaping and planting, historical signage, public art, dining and shopping. The motivation for this is usually focused on reducing the perceived uniformity of the beach frontages of the Gold Coast. This is summarised by one group member as: 'Use increased space to provide more social and commercial nodes, not to create ribbon development along the beach front; moreover tie in nodes with transport and foreshore features, increase public art and stories of the past and environmental elements throughout. Commercial nodes to comprise restaurant, café, licensed areas in select locations consistent with good transport planning/public transport connections'.

6.5 Concluding the Chapter

This chapter opened with a quote from Alexander *et al.* (1987) that addressed the issue of piecemeal acts of development threatening the continued existence of meanings and values which people associate with specific natural features like rivers and beachfronts. It is clear from the research in this thesis that Alexander's query goes to the heart of the issue of development in places that have values associated with public access to the intrinsic values of those places. There were common, shared and unique themes in the content analysis of the Delphi group, Oceanway and public access articles. These themes can be seen to represent the values of the places in the beach precinct in different contexts. These contextual values will be discussed in this section.

Examining the themes that arose in the content analyses of the public access and Oceanway articles and the responses of the Delphi group, we see that the governance, urban design, activity, amenity and facility are common to all of the content analyses conducted in this research (Figure 6.5). The environment was a shared theme in the analysis of the Delphi group responses and the public access articles, but it was a topic embedded in the themes of governance and conflict in the Oceanway articles. ‘Social dimensions’ was a shared theme of the Delphi group responses and the Oceanway articles but they were subsumed as topics of governance and conflict in the public access articles.



Key: Purple = common themes, blue = shared, others = unique

Figure 6.5: Summarising the Themes in the Content Analyses of the Chapter (Author 2013)

‘Conflict’ was a shared theme of the content analysis of the Oceanway and public access articles but was subsumed as a topic of governance in the Delphi group responses. There were also unique themes for each of the content analyses. ‘Values’ were a unique theme for the Delphi group responses. ‘Opinions’ (on the Oceanway) was a unique theme for the Oceanway articles and ‘property’ (private and public) was a unique theme of the public access articles, although topics within this theme did occur in the Oceanway conflict theme.

All the themes common to each content analysis were predetermined descriptive codes as were the shared codes of environment and conflict. However, ‘conflict’ was not a major theme in the Delphi group responses and neither was the ‘environment’ in the Oceanway articles. The common, shared and unique themes reflect the different orientation and intent of the content of the Delphi group responses, articles and comments analysed in this research.

The unique themes emerged during coding and are related to the content of the different data sources. Delphi group members were specifically asked to express their opinions and comment on their reasons on the questions asked of them. The Oceanway articles express the views of web authors and invite comment from the public on the appropriateness of constructing a pathway along the beachfront in front of people’s homes. The public access articles were concerned with the legal and social conflict produced by the public accessing the beach where private property restricted or prevented this access.

The following sections will conclude this chapter by contrasting and comparing the themes of each of the content analyses conducted, firstly, by examining the nature of the common themes, then the shared themes and finally the unique themes. This will illustrate the shared and divergent views and opinions of the public, interest groups and the professionals involved in the design, planning, development and management of beach precincts. It will also examine the intensity of the opinions about the prioritisation, ordering and frequency of coding of topic references for the appropriate amenities and facilities to support visitation, use and activity in the beach precincts.

6.5.1 The Common Themes of the Content Analyses

Governance

The common themes of the content analyses are governance, urban design, activity, amenities and facilities. The nature of the coding of topics to the common theme of Governance indicate that the way people understand or construct meaning about places can be as a result of who they are, what motivates them and how they perceive their interests to be best enabled. For example, members of the Delphi group are motivated by their roles, largely perceive through their education and suggest strategies to problems based on their professional experiences.

Oceanway advocates and opponents are motivated by their personal narratives for the best use of the public property of the foreshore dune. The political and locational area of dispute

between them is in the interpretation of appropriate regulation and control of that public property and whether privacy for residents or access for the public should be a prioritised use.

The public access narrative is more concerned with the nature of legal access to the beach from the foreshore. This is dependent on the history and precedence established in the different legal jurisdictions examined for the degree of public access between or through public foreshore property to the public area of beach and the definitions of where the public may and may not go to access it (Table 6.5.1a).

Table 6.5.1a: Relative Frequency of Topic Coding to Governance (Author 2013)

	Delphi Group Responses	Oceanway Articles	Public Access Articles
Governance	Levels of Government Strategies Development Processes Regulation and Control Policies and Plans Public Access Planning Processes Conflicts Land Use Benefits Prioritisation Adaptation Beach Engineering Public Rights Costs Programs Boundaries Compensation Integration Housing Population Consultation Change Education Research	Political Processes Regulation and Control Public Safety Egalitarian Values Local Government Economic Costs Traffic Project Incompetence and Waste Tourism Executive Decisions Management Losses for Beachfront Owners Legal Action Consultation Community Groups Rate and Taxpayers Erosion and Climate Change Natural Environment Policing Legal Liability State Government Ageing Population NIMBYs Legislation Policy and Program Commonwealth Government Research	Beach Access Land Use Stewardship Public Infrastructure Decisions Planning Preferred Uses Climate Change Development Policing
Topics in each theme are listed in descending order of coding incidence			

It is possible, when examining the incidence and order of coding, to construct a governance narrative for each of the data sources concerning the areas of perception of the different groups for the slightly different focuses of each source in the content analyses.

The Delphi group perceives the problems posed through the questions (Appendix E) as the domain of different levels of government, primarily resolved through prioritisation,

regulation and control of development and planning processes that are guided by strategies laid out in policies, plans and programs.

The main topics for the planning processes concern public access, land use, public rights, the boundaries of the problem and, less importantly, consultation, education and research. The issues to be resolved are conflicts, benefits and costs. The topics which influence the resolution of the issues are adaptation to climate change, the suitability of engineering solutions, compensation for property owners, population change and growth, the location of housing and managing change.

The advocates and opponents of the Oceanway project perceive the problem of the suitability of a public infrastructure route along the foreshore as a political process, largely centred in the local government domain with some influence of state and, to a lesser degree, of commonwealth government. Appropriate solutions are seen to be determined by executive and management decisions of the mayor and council and, to a lesser extent by legislation, policy and programs of the state and commonwealth governments.

The advocates of the Oceanway project cite the main issues which should influence the decision making process as public safety with an emphasis on disability or age, egalitarian values, access conflict with traffic on the nearby streets, promotion of tourism, erosion and climate change adaptation. The opponents of the project also cite public safety, incompetence and waste of rate and taxpayers' money, losses of privacy and security for beachfront owners, the natural environment and difficulties in policing as reasons to reject the project.

The advocates of the Oceanway project make demands for local government to consult the wider community and oppose the nimbyism of beachfront residents. The opponents of the project threaten legal action that they know the council is seeking to avoid, and demand that the legal liability for the protection of their property to beach erosion and extreme weather events should be borne by council. They also seek to prevent the public use of the foredune using a claim that this will protect the natural environment.

The public access to the beach authors and commentators come from a range of jurisdictions, although predominantly from the United States, and this appears to be reflected in the narrative. The problems of beach access from the built environment is perceived to be an issue of stewardship and, to a lesser extent, a policing function of government for decisions that concern land use and the provision of public infrastructure that can be resolved through

planning process for the preferred uses of the beachfront as either public or private property in light of expected climate change.

Urban Design

The coding of topics to the descriptive theme of urban design was created by the researcher from the interpretation of the content analysis of the Oceanway and public access articles to predetermined themes. The urban design principles of the research were determined by section 3.3 to be governance, accessibility, diversity and human scale and need. However, during coding the prevalence of reference to the values of society that identify with design, the specific uses of the safe use of the Oceanway in its location between private property and public foreshore produced coding for design values and surveillance (Table 6.5.1b).

Table 6.5.1b: Relative Frequency of Topic Coding to Urban Design (Author 2013)

	Delphi Group Responses	Oceanway Articles	Public Access Articles
Urban Design	Access Form Beach Transitional Corridor Principal Built Form Spatial Relationships Sense of Place Context Proximity Permeability Public Transport Walkability Human Scale and Need Diversity Opportunity Transit Corridor Size Scale Aesthetics Street Structure Barriers Safety Sensory Perception Disabled Access Nodes	Governance Accessibility Human Scale and Need Design Values Surveillance Diversity	Accessibility Governance Human Scale and Need Connectivity Diversity Aesthetics Social Nodes Pathways
Topics in each theme are listed in descending order of coding incidence			

Similar reference prevalence generated coding for connectivity, aesthetics, social nodes and pathways in the public access articles. This can be seen as logically determined by the nature of the issue of accessing the beach through the gateway transitional corridor from the built to natural environment, through the literal walls of private property commonly lining the beachfront in the United States. The private property narrative is linked to local state laws on beach access, originating in colonial laws governing fishing, fowling and trade on coastal margins rather than recreational access for restorational purposes.

In most respects the predetermined urban design principles covered the nature of the urban design content of the Oceanway and public access articles. The relative frequency of coding incidence also generally indicates the order in which the public places the principles. The Oceanway, as a transit-oriented project with recreational cycling dimensions, has produced a narrative heavily focused on governance (503) and accessibility (164) whereas the public access to the beach articles prioritises accessibility (54) over governance (34). Both the Oceanway and public access articles then prioritise human scale and need (72 and 12 incidences respectively) over diversity (2 and 4 incidences respectively).

The Delphi group responses to urban design exhibit, as expected, a much greater fluency of description of the topics of urban design and at the same time indicate some of the organising topics that professionals use in the design and planning of urban places. The Delphi group included topic references to elements of the typology of urban beach precincts (section 2.2) as well as the urban design principles selected for the research.

The elements of the typology given the highest implied priority by the Delphi group by frequency of incidence are: access form (77), beach transitional corridor (72) and the principal built form (61). Of lesser importance to the group was the transit corridor (11) and nodes (4).

Governance is a theme with its own topics in the Delphi group analysis and references to accessibility were largely described in terms of the access form and the use of the terms proximity, permeability, walkability, barriers and disabled access in the responses. In response to a question investigating their preferences for the design of beach precincts the Delphi group elaborates the important issues as the size and scale, spatial relationships and arrangements of land uses.

The other urban design references would appear to reflect the way that the different professions represented in the Delphi group think about the appropriate design of places. The most prominent topics were sense of place and context. Less frequent references were made to public transport, opportunity, aesthetics, street structure, safety and sensory perception, the references for which were concerned with the way that people perceived places, rather than metrics of perception.

Activity

The frequency of coding to topics that were concerned with activity in the beach precincts reflect the nature of the questions to the Delphi group and the narratives found in the Oceanway and public access articles. As noted previously in section 6.1.3, walking is the most reported reason for visiting the beach precinct and the most observed activity. However, it does not feature in the activity topics referred to by the Delphi group. Instead, general references to recreation and surfing are the main activity associations the Delphi group make to beach precincts.

The descriptive codes of walking, cycling, and pushing a pram, wheelchairs, driving, jogging, skateboarding and beach activities were the predetermined topics that arose from the field observations (section 5.2). It is noticeable that although walking (including dog walking) was the most common observed activity, cycling was slightly more referenced than walking in the Oceanway articles, probably reflecting the role of the project as a transport route.

The observations also placed pushing a pram as the third most common incidence of movement (219), followed by jogging (63), skateboarding (28) and using a wheelchair or mobility device (20). However, wheelchairs were referenced more highly in the Oceanway topics than in the observations and often used as a reason to justify the building of new sections of the Oceanway (Table 6.5.1c). Driving is seen as an exceptional activity reference to the use of the streets parallel to the intended route of the Oceanway.

Table 6.5.1c: Relative Frequency of Topic Coding to Activity (Author 2013)

	Delphi Group Responses	Oceanway Articles	Public Access Articles
Activity	Recreation Surfing Cycling Diving Fishing Water Sports	Cycling Walking Pushing a Pram Wheelchairs Driving Jogging Skateboarding Beach Activities	Walking Passive Activities Tourism Surfing Active Recreation Boating Fishing Nudism Driving Cycling Other Activities
Topics in each theme are listed in descending order of coding incidence			

The public access articles largely prioritised walking and cycling in the same order as they had been observed to occur in the observations. Although the topics of pushing a pram,

wheelchairs, jogging and skateboarding were absent from the narrative. It is interesting that passive activities and tourism were more commonly referenced than active recreation and often include a reference to viewing. The different geographic and morphological beach contexts from which the public access articles arise may also explain the slightly more diverse activity topics of the content analysis of the public access articles.

Amenity and Facility

The range of topic references to amenity and facility by the Delphi group reflects the larger professional vocabulary used by the members of the group to describe the amenities and facilities they valued in beach precincts. The Oceanway and public access articles indicate the particular context and focus of the two slightly different narratives about the appropriate design solution for the beachfront transitional corridor and transect pathway from the built environment to the beach (Table 6.5.1d).

Table 6.5.1d: Relative Frequency of Topic Coding to Amenity and Facility (Author 2013)

	Delphi Group Responses	Oceanway Articles	Public Access Articles
Amenity and Facility	Amenities Beachfront Views Shade and Shelter Public Space	Amenities Privacy Views Views	Amenities Views Public Space Beachfront
	Facilities Commercial Foreshore Park Pathways Event Space Parking Esplanade Restaurants and Cafes Walk and Cycle Ways Beach Access Points Public Art Public Transport Stops Resorts Concessions Toilets Boat Ramp Life Guard Facilities Plantings Caravan Parks Children's Playground Covered Bench Tables Swimming Pools Historical Signage Licensed Premises Shops and Offices Barbeque Showers Picnic Areas Harbours	Facilities Oceanway Footpath Streets and Roads Public Infrastructure Cycleway Foreshore Park Beach Defences Surf Lifesaving Club Art Installation Playground	Facilities Beach Access Parking Commercial Foreshore Park State or National Parks
Topics in each theme are listed in descending order of coding incidence			

The amenity of views was common to all three content analyses. Public space and beachfront were referenced as amenities by both the Delphi group and the public access articles. It is thought to be significant that neither was referenced in the Oceanway articles, as it reflects the current nature of the beachfront with rows of homes and apartments along the dune crest where the public space of the beachfront would be. On the other hand, privacy and views were most often referenced by the opponents of the Oceanway as reasons to oppose the project.

The only facility topic common to all analyses is the foreshore park. Commercial facilities were a common topic for the Delphi group and the public access articles, and it may be significant that they were not included in the Oceanway articles because the nature of the space and location of the project does not envisage a park space. Oceanway, pathways, esplanades, walkways and cycleways are common to the narrative of the Delphi group and Oceanway articles at a relatively high frequency, indicating that routes and movement through the beach precinct were an important consideration for both.

The next group of facilities especially in the Delphi group responses indicate facility groups that create reasons for visiting the precinct, facilitating visitation and supporting extended stays. This group includes event space, restaurants and cafes, children's playgrounds, swimming pools, beach access points, parks, amusement parks, public art, barbeques, picnic areas, licensed premises, shops and offices, boat ramps, harbours and the surf life saving clubs.

The Oceanway articles largely focus on the Oceanway itself as a facility that creates its own reasons for use and visitation. There are also frequent references to a footpath and cycleway as alternative narratives of a possibly preferred use of the beachfront transitional corridor. The public access articles are more narrowly focused on the nature of the beach access points themselves and adjacent commercial development, foreshore parks and the state or national parks that some beaches are accessed through as found in Burleigh Heads National Park.

The facilities which support visitation include parking, which is a topic common to the Delphi and public access themes. The need for supportive infrastructure for the safe and comfortable use of the Oceanway was indicated by references to streets and roads, showers, lighting, closed circuit television cameras, policing and security. The Delphi group also included these facilities as important in supporting visitation and use, but also added facilities expected of a foreshore park. These included seating, information and historical signage,

trees and plantings, concessions, covered bench tables with some references to resorts and caravan parks which support tourist and extended visitation.

6.5.2 The Shared and Unique Themes of the Content Analysis

The themes of ‘conflict’ for the Oceanway and public access articles, the ‘environment’ for the Delphi group and public access articles and ‘social dimensions’ for the Delphi group and Oceanway articles were identified as shared coding. The unique themes of coding are ‘values’ for the Delphi group, ‘property’ for the public access articles and ‘opinions’ for the Oceanway project.

Conflict

Conflict was subsumed into governance in the Delphi group responses, although it was a significant theme of the Oceanway and public access articles. This is thought to be representative of the nature of the narratives surrounding the construction of the Oceanway and the ability of the public to access the beach from the built environment (Table 6.5.2a).

Table 6.5.2a: Relative Frequency of Topic Coding to Conflict (Author 2013)

	Oceanway Articles	Public Access Articles
Conflict	Council and Councillors Conflicted Interests Politicians and Political Processes Beachfront Residents Opponents of the Oceanway The Wealthy Proponents of the Oceanway Excessive Cost or Time Anti-Social Behaviour Engineering Cyclists Sarcasm Election Threats Traffic Delaying Tactics The Legal System News Media Outsiders Public Access Corruption Threats by Cyclists Agitators Walkers Children Real Estate Professionals Sexual Behaviour Drivers Joggers Prams The Greens The Elderly	Anti-Social Behaviour Blocking Public Access Motives Fears Indigenous Rights Criminal Acts Activism Obscured Access Democracy Financial Benefit and Loss Responsibility Personal Abuse Drugs and Alcohol Curfews Sexual Behaviour Envy Noise Age and Gender Race Privilege
Topics in each theme are listed in descending order of coding incidence		

The nature of the topics of conflict concerned the online arguments that individuals, groups, government bodies and institutions were making and the public commentaries posted to some of those articles. These arguments were also analysed for their structure, claims and evidence cf. Hart (2007). Most of the claims made in the articles and comments were claims of value, policy and fact. The argument structure of the narratives was largely assertions of value or fact, although the authors did elaborate condition or describe the arguments.

There was a significant element in the overall narratives surrounding the Oceanway and the public access articles which included propositional claims of opinions and accusations of unethical motives directed at either opponents involved in the argument or towards individuals or institutions who were making decisions or proposing changes to the status quo. These accusations were both specific and generic. For example, the accusations in the Oceanway articles were directed specifically at individual councillors or generically at councillors or the council. They were also directed at politicians and political processes, beachfront residents, opponents of the Oceanway and the wealthy or privileged, all of whom were considered by authors and commentators to have conflicted interests.

The conflict content analysis of the public access articles reveals different sets of antipathy and conflict to the Oceanway articles. Advocates who wanted to restore, maintain or create public access to the beach from the built environment made allegations or claims that residents were blocking public access by various means including:

- erecting fences, walls and locked gates and planting hedges across public access ways;
- opposing the construction of public pathways and often invoking environmental regulation to restrict access;
- corrupting local politicians and political processes to prevent the building of access paths, parking and public infrastructure that supports public visitation as well as the improvement of public roads and paths leading to the beach, thereby making them remote and difficult to access;
- verbally and sometimes physically abusing people attempting to use the beach or foreshore, threatening prosecution for trespass, employing armed guards and erecting illegal private beach and property signs to prevent legitimate public access to the beach, ignoring instructions to remove private gardens and facilities that have encroached on public land adjacent to their properties, and

- initiating obstructive and delaying litigation against small local councils to inflict unacceptable legal costs, challenging the details of public access law at state and federal level and applying to create private property from public land and, in the United States, attempting to uncouple public access requirements to funding for beach restoration and protection

The common arguments deployed by the opponents of the Oceanway and public access to the beach included fears of criminal acts and anti-social behaviour if people were allowed to access public land on the foreshore or beach adjacent to private property, causing beachfront residents loss of privacy and damage or theft of property. The opponents of the construction of the Oceanway and public access also cited the excessive cost and time of construction of new public access routes and supportive infrastructure, engineering requirements for sea wall defences, increased traffic, noise, the presence of outsiders, drug and alcohol use and sexual activity as reasons to oppose new sections of foreshore pathway or improved public access.

The proponents of the Oceanway and public access to the beaches invoked Indigenous rights, democratic ideals, improved tourism opportunities, responsible provision of facilities, improved real estate values and improved egalitarian access for the disabled and elderly to support the maintenance or creation of public access and infrastructure, and often commented sarcastically in comments directed at those who opposed the project.

Antipathy towards identified groups or activities was a feature of both the Oceanway and public access articles. Election threats were made towards individual politicians and parties both by opponents and proponents of the Oceanway and improved public access. Identified and unnamed individuals were stigmatised and dismissed as activists, agitators and in a few cases derogatorily as ‘greens’.

Opponents of the Oceanway and public access made negative comments directed towards the media about their professionalism and conflicted interests. Cyclists complained and made threats against beachfront residents, walkers, children, drivers, prams and the elderly. This was reciprocated by those groups and both made comment on the anti-social behaviour of the other.

Environment

The theme of the environment was coded for topics in the Delphi group responses and public access articles and subsumed under governance in the Oceanway articles. The expertise of the

Delphi group was again apparent in the range and detail of their responses. The public access articles focused on the damage that erosion and climate change caused to public and private property and who should be liable to protect that property (Table 6.5.2b).

The Delphi group was careful to define the environmental context of coastal processes, natural features, nature of the beach and topography in any response to local and regional solutions to erosion and inundation caused by climate change or extreme weather events. The Delphi group was unanimously in favour of adapting planning and development regulation and control to allow a planned retreat and reduction of development from the ocean to create a beachfront buffer zone that would both conserve natural ecologies and protect development.

Table 6.5.2b: Relative Frequency of Topic Coding to Environment (Author 2013)

	Delphi Group Responses	Public Access Articles
Environment	Environmental Context Coastal Processes Natural Features Nature of the Beach Climate Change Topography Erosion and Inundation Conservation	Damage Protection Erosion Climate Change
Topics in each theme are listed in descending order of coding incidence		

The Delphi group members were opposed to all but essential beach engineering, whereas the public access narrative was more complex. There were only infrequent references to climate change but there were more to the effects of erosion and the need to protect existing coastal development from damage by extreme events.

The main narrative in the public access articles was about who should pay for protecting coastal property and whether there was an obligation for those protected by public money to allow public access. The public access articles were also concerned with pollution caused by development and industrial processes damaging coastal resources and threatening sensitive local ecologies.

Social Dimensions

The narrative of coding for the social dimensions theme of the Delphi group and Oceanway articles reflects the different nature of the two data sources. The Delphi group is responding to particular questions surrounding urban design, planning, governance and development. The Delphi group responses reflect their structuring of groups and communities into their

arguments and the provision of appropriate activities, amenities and facilities to the context of place. They are also specifically responding to a request to supply affective data on their personal meaning of the beach (table 6.5.2c).

Table 6.5.2c: Relative Frequency of Topic Coding to Social Dimensions (Author 2013)

	Delphi Group Responses	Oceanway Articles
Social Dimensions	Groups Community Beach Precinct Users Social Activities Motivation Personal Meaning of the Beach	Motivation Behaviour Crime Enjoyment Exceptions Deception Disability Envy
Topics in each theme are listed in descending order of coding incidence		

Both the Delphi group and Oceanway articles concern themselves with the motivations that individuals and groups in the community have for the use of beach precincts. The Delphi group comments on the motivation that people have to live close to the beach, the reasons that developers would have in developing coastal property, the need for community consultation and education to encourage sustainability and the motivation of the different individuals and groups concerned with beach precinct planning and development.

In contrast, the Oceanway articles are very diverse in their examination of the motivation of the individuals and groups who are opponents and proponents of the project. These have been examined in the theme of conflict, but it is notable that a relatively large topic of exceptions (68) had to be created. This topic is concerned with people giving their personal reasons for the position they take on the project. In doing so they illustrate or give an opinion as to why the project is either a good or bad idea. These opinions are often based on their personal experiences on the Gold Coast and other locations. In these exceptional comments they often make reference to behaviours of others, such as deception and envy as causes of social disharmony.

The Oceanway articles also make frequent reference to the enjoyment that the author or commentator experiences in beach precincts and tie this to their reasons for either opposing or supporting the project. Similarly, disability is used as a reason for the construction of the Oceanway for people who cannot walk on the beach, as well as a reason to oppose it due to the supposed danger that the Oceanway will produce for disabled users.

Unique Themes

The unique themes of ‘values’ in the Delphi group responses, ‘opinions’ in the Oceanway articles and ‘property’ in the public access articles reflect the focus and nature of the narrative of the different data sources. The values of the Delphi group have been examined in Section 6.4 and the opinions of the Oceanway authors and commentators in Section 6.1. The topics coded to the theme of property reflect the nature of the opposing narratives of the public access articles and the legal arena in which the boundaries are contested (table 6.5.2d).

Table 6.5.2d: Relative Frequency of Topic Coding to Property (Author 2013)

Public Access Articles	
Property	Public Property Creating Public Access Public Land Rights Public Safety
	Private Property Creating Ownership Private Land Rights Property Protection Privacy
	Law Statutory and Constitutional Legal Principles Legal Processes Land Ownership Legal Arguments Legal Actions Interpretation Criminal Activity Public Trust Doctrine Legal Judgements
Topics in the theme are listed in descending order of coding incidence	

There is a clear division between public and property topics. The topics for public property are concerned with the creation of public access and are justified in terms of egalitarian and historical public rights of access to the beach and foreshore and the safety of the public. The private property topics reflect the narrative of creating new or protecting existing private property and the rights to privacy and enjoyment of views and location in a safe environment.

The arena of conflict between public and private property concerns governance but, in particular, it is about contested interpretations. Depending on the jurisdiction, local, state and commonwealth levels of government may have competing statutes and laws and, in the case of some countries, the constitution governing the public access to beaches from the built environment, as well as defining the limits or boundaries of public and private property. The

conflict is also about controlling the nature of development and processes to which development of public and property is expected to conform.

The rights to public and private property and, in turn, where people may go, are often in a state of legal contest, particularly in the topographically unstable transition from built to natural environments. It is this beachfront transitional corridor along the coast that is most often the subject of legal arguments, interpretation and judgements that are often constantly challenged and reviewed.

The boundaries are subject to legal principles and are supposed to regulate and control the uses and extents of public and private property. The public and private property owners both create conflict by trespassing across these boundaries, redefining or extending the use of private or public land or acting in a way that is perceived as criminal. This conflict over appropriate use and extent of the public realm takes place in a historic context in which levels of government are supposed to promote the public trust doctrine, but often fail to do so.

Having thoroughly analysed the different data sources regarding the design, planning, development and governance of the public realm of beach precincts, we now move on to the concluding chapter of the thesis. This will discuss and review the main findings of the research and suggestions will be made for a research based model of urban design and planning from which urban design guidelines and planning policies and procedures can be developed for beach precincts.

Chapter Seven People and the Purposive use of Place: Conclusions

All things are subject to interpretation. Whichever interpretation prevails at a given time is a function of power and not truth. After Friedrich Nietzsche (1888)¹.

This chapter concludes the research into the urban design attributes characteristics and values of the beach precincts. The following sections will examine the holistic and layered response to the overarching research question and its subsidiary questions (Section 1.7) into how well the urban design of the different beach precincts meet the expectations and preferences of the different user and interest groups.

The first section of this chapter will review the findings of the research. The second section will recast the implications of those findings and suggest ways that the urban design of beach precincts can best meet the needs of residents, tourists and visitors in an egalitarian way. The final section will propose a research model to shape future research into those needs.

Nietzsche's observation on the interpretation of social and political narratives being subject to the location of power resonates throughout the inquiry into the role that beach precincts functionally play in different people's lives. The thesis demonstrates that the urban design attributes and spatial characteristics of the different types of beach precinct found on the Gold Coast are the interpretation of best use of the public realm by dominant and project groups.

They have had the power to allocate public and private space, align urban development and decide on the appropriate characteristics of those spaces and buildings to meet their collective preferences and values of beach precincts since the Gold Coast was first developed.

It is through the pursuit of the agendas of dominant and project groups, and by the exercise of their power in the processes of governance, that they have decided how spaces will be arranged and how those spaces will be provided for in terms of public and private infrastructure. The most important governance decisions they have made concern the nature of accessibility from the built environment through the transitional corridors, locations and edges. Those decisions will either support egalitarian visitation or enable project group use or private territorialisation (Sections 5.4 and 6.1).

¹ Thought to be a modern interpretation of: 'I should say: no, it is precisely facts that do not exist, only interpretations', P458. 'The Portable Nietzsche' edited by Walter Kaufmann 1954, Viking Press.

Governance is explained by Gregory *et al.* (2009) to loosely mean government, but more precisely the term refers to the ‘processes of social and economic coordination, management and steering’. There are many interpretations concerning the identity and role of the different actors in governance and the term is a fluid one with diverse interpretations in meaning to suit political agendas. The interpretation of governance used in this thesis is also described as ‘governmentality’, or the exercise of power in the enclosure, restriction, partition and control of space by different levels of government and non-government public, private and voluntary groups (Foucault in Rabinow 2000).

We will now review how the preferences and values of dominant and project groups within, and beyond, the Gold Coast have all contributed to the political process to produce a cultural landscape which reflects the interpretation of what is valued, where it should go, what it should look like, what activities may take place and how it should be provisioned, managed and maintained.

7.1 Reviewing the Findings of the Research

This section will review the findings of the research. It will do this by presenting a summarised review and distilling the findings elaborated in the concluding sections of Chapters Two to Six and relating them to the research intent of the thesis contained in Chapter One.

Chapter by chapter, and section by section, this thesis has built a holistic understanding of the nature of each precinct and the irreducible components of physical features, activities and functions and meanings as suggested by Relph (2006).

In Chapter One, the historical and physical context of the governance of the contemporary Gold Coast beach precincts was described and the influences on their development were discussed. The car-dependent orientation of American-influenced urban design along the majority of the Gold Coast shoreline since the 1950s is contrasted with the British and European influences on some of the older coastal settlements.

An important historical governance decision was the location of residential property along long sections of the beachfronts. This was determined in a time when the problems associated with climate change, such as coastal erosion and periodic severe weather events, were not generally recognised or understood (Sections 1.2 to 1.4).

The orientation of local government towards tourism, construction and active transport agendas was identified (Section 1.1 and 1.3). The channelling of residents in the northern, central and southern inland suburbs by limited routes, through layers of canal and golf course estates towards beachfronts, with some form of coastal pathway or foreshore park, was also explained (Section 1.5).

These route networks and land use allocations have resulted in limiting public access to about one half of the Gold Coast beachfronts and creating a quieter private environment for the suburbs with beachfront residents. The social and environmental sustainability of these governance decisions was questioned, given that many of the users of the beach precincts are residents of inland suburbs and only able to travel to the coast by private vehicle (Section 1.5).

The governance decisions over the historical development of the Gold Coast have combined to create three unequal groups of users of beach precincts; the privileged beach suburb residents who can use the precincts as an active transport, recreational and exercise route; the tourist who can use them to explore the city from a base in the beach precincts and, finally, the disadvantaged residents of car-dependent inland suburbs and the region for whom the beach precincts are primarily a destination for social, recreational and restorational purposes.

In Chapter Two the typological analysis of the three different beach precincts identified the spatial allocation of facilities and the arrangements of the access form, transect and transit pathways and transitional spaces of the public realm of the precincts as crucial in determining which activities are allowed, restricted or denied.

For example, the residents in Mermaid Beach have their privacy protected by engineering and planning devices. These devices include the one way local street network, the remoteness of the beachfront from public transport routes, the location and design of beach access points. These have been reinforced with limited parking availability and the driver/cyclist-oriented design of the street environment, which deters walking and non-residents (Section 2.4.6).

In all the precincts studied, the size and location of the SLSC buildings, parking lots and the car-oriented design of the roads and street frontages affect visitation options and choices. The design of the residential and tourist buildings adjacent to foreshore parks restricts the use and activity options in those parks. The dunal plantings in the precincts also limit the physical, visual and spiritual connections (Carr 1992b) for the public to the beach from the foreshore park and adjacent streets (Section 2.4.2).

The thesis then turned, in Chapter Three, to examining urban design theories and guidelines for development of the public realm by professional designers and planners, in order to explore public and professional perspectives on the design of beach precincts and address subsidiary research question 3 (Section 1.7):

What expectations, preferences and values of the public realm of beach precincts are held by the different user and interest groups?

The cultural identities and political roles and influences of those professionals who formed the contemporary cultural landscape of the different beach precincts were examined. An understanding of the political process of the formation of the urban design theories was revealed which would be used in an analyses and survey of the different beach precincts.

The literature review established that the way a beach precinct meets the functional needs of residents, tourists and visitors is determined by a political process, which facilitates the interests and needs of the dominant and project groups. The existing urban design guidelines reflect the motivation and political intent of their authors. The competing urban design narratives have also produced contested interpretations of the nomenclature of the field, which also influences their production and use (Sections 3.0 and 3.1).

The review established that urban design theories and guidelines are the functional vehicles for the delivery of the political agendas of different historical and contemporary political movements. The most influential of these on the Gold Coast at this time are:

- the public-health based, global, healthy cities movement, active living and transport agendas,
- the American-influenced, urban structural approach of architects, developers and planners affiliated to smart growth, and
- the less influential, but resilient, incremental social improvement, public safety and economic progress town planning movement originating from the United Kingdom.

All these movements have had some governance input in the decisions for the design and spatial arrangement of facilities in Gold Coast beach precincts (Section 3.2).

When different urban design guidelines were textually analysed to identify the desirable properties of a walkable place, it was possible to identify four essential urban design principles; governance, accessibility, human scale and need, and diversity. The selected

design principles all had attributes, characteristics and values attached to them that could be used for a walk-through urban design analysis of beach precincts (Section 3.3).

Governance is very tightly interactive with the attributes of accessibility. The design principle of human scale and need was informed with metrics derived from people's sensory interaction with the environment. Human scale and need were also aligned with inherent values of the restorative environment to the foreshore, beach and ocean and preferences for functional use (Section 4.0).

In Chapter Four the urban design typology of beach precincts was used to determine the locations where the urban design principles could be applied in the walk-through urban design analysis of the selected beach precincts. The urban design analysis was founded in the sampling, purposive and transects analysis tradition of archaeological practices of site survey, rather than the established survey-analysis-plan method of urban planning. This method analyses activity and use related to visible, contemporary, cultural artefacts located in the built and natural topography (Section 4.1).

The walk-through urban design analysis complements the typological analysis of the spatial relationships and land use allocations of the public realm conducted in Chapter Two. In combination the analyses and surveys address the subsidiary question:

What are the urban design attributes and characteristics of selected Gold Coast beach precincts?

The urban design analysis was conducted at the key typological transitional locations of social node, beach access point and intersections, or from change of the access form to the principal built form, located along the traverse and transect pathways. The walk-through gathered information on the design characteristics of the beach precinct that enable or hinder the use of the beach precincts for different users (Section 4.2). This helps to address the subsidiary question:

How well does the urban design of the public realm of different types of beach precinct meet the preferences and values of the different user groups of those precincts?

During the research, the methods employed to examine the research questions began to reveal important attributes, characteristics and values of the beach precincts. These could be organised to provide a framework for future research into the typological and urban design of

different beach precincts. The framework relies on analysis, observation and inquiry into the following attributes, characteristics and values of each precinct to reveal patterns and relationships between the different elements of the typology and the purposive use of the beach precinct:

- analysis of the governance of walkability and accessibility of the beach precinct
- analysis of the attributes and characteristics of the beach precinct as comfortable, secure and inviting
- the observed patterns of the different types of activity related to locations
- the observed patterns of social activity related to locations by age and gender
- the observed relationships and patterns of activity with amenity and facility
- inquiry into people's preferences and expectations of beach precincts
- inquiry into people's preferences for beach precinct use and design
- inquiry into the preferences for beach precinct design and development of different design, planning, development and user groups
- inquiry into the preferences for beach precinct design and development of the identified constituencies of advantage and disadvantage

The following sections will review the findings of the thesis for each of these elements. However, the thesis research design did not include an explicit inquiry into the preferences of the identified constituencies of disadvantage. This important component of an egalitarian beach precinct design solution will be addressed in the final section of this thesis.

7.1.1 The Analysis of Governance and Accessibility of the Beach Precincts

The walk-through urban design analysis of the different beach precincts in Chapter Four found governance decisions about accessibility of the social, recreational and restorational benefits of the beach precincts. During the course of this analysis, it became clear that governance of the location and allocation of public spaces to different uses, and the accessibility of public amenities and facilities were the determining factors in how well the urban design of the different beach precincts met the expectations, preferences and values of the different user and interest groups in the precincts.

In each of the beach precincts of the study, the use of the public realm for a leisurely walk or promenade, viewing and recreation is compromised by the shared path permission for cyclists and powered wheeled vehicles. As a consequence, the ability to relax and unwind from the

stresses of urban living, free from the obligation to conform to a traffic environment and regulations, is compromised especially for the constituency of disadvantage (Section 4.2).

Other common urban design and planning decision that compromise the social, recreational and restorational benefits of a visit to a beach precinct on the Gold Coast are:

- Lack of information or signage for people who are walking, pushing a pram or walking a dog in the beach precinct with useful scale and detail for visitors from the Gold Coast and beyond, with no major visitor languages catered for. There is also little or no signage to inform walking visitors of historical context, events or activities which may enrich their visit to the precinct, although there will be information on distant locations that can only be reached by bicycle or car.
- Pathways in the foreshore parks are designed to be relatively straight, unobstructed or constricted by the use of seating and other street furniture (Australian Bicycle Council 2013). This is contrary to a walker's preference for paths that use framed views, end vistas and meandering courses (Lynch 1981). The design of these pathways often do not meet the needs of pedestrians for regular resting places with shade and shelter, nor lighting suited to people walking in the precinct after dark. Neither do they have tactile surfaces suitable for people with vision impairment.

The transitional spaces in the Broadbeach beach precinct are poorly designed and change abruptly at the edges of each environment. It is difficult for people with mobility or sensory disabilities to navigate and move through the gateway transition from built to access form due to the width of the road, parking, and traffic volume (Section 4.2.1).

The only traffic controlled crossing of Old Burleigh Road in the precinct is near the Oasis Shopping Centre. This means there is no safe route for the mobility or perceptually impaired from Albert and Charles Avenues to the foreshore park. The Kurrawa SLSC, and its large car park, visually and physically divides the foreshore into two disconnected parts. There is also little visual connection from the built and access form of the precinct to views of the beach and ocean because of dunal plantings (Section 4.2.1).

In the Broadbeach beach precinct it was noted that the size and design of the Old Burleigh Road, Kurrawa SLSC and its car park affect the location of facilities and activity. People move quickly away from the road to the viewing platform or into the foreshore park. The children's playground is located in the centre of the northern foreshore park, away from

pathways, and distant from assistance and passive surveillance. It is thought that this is partly in order to limit conflict between users of the park and cyclists and to retain open space for event use (Section 4.2.2).

In the Burleigh Heads Precinct the location of the SLSC building and associated parking again determines and controls the size and uses of the foreshore park through the location of pathways, facilities and activities. Other parking and traffic problems for walking visitors to the precinct include the permeability of routes through the car-park along The Esplanade, and through the end-on parking along Goodwin Terrace (Section 4.2.1).

The nature of the Gold Coast Highway, with high traffic volume and noise, its width and crossing design, the timing of the lights, physical barriers and location of the bus stops discriminates against the elderly, mobility or perceptually disabled and tempts some, usually young or adult, males to risk crossings away from the traffic lights. The Burleigh Heads beach precinct is both accessed by the Gold Coast Highway and bisected by it physically, although a visual connection to the beach and ocean is maintained in the precinct (Section 4.2.4).

In the Mermaid Beach precinct the shabby, unattractive streetscape and poorly constructed, narrow and uneven pathways are the dominant urban design features for walking visitors. Vehicles and cyclists dominate most of the available public space of the streets in the suburb, with only the small foreshore park, the SLSC building and a café to relieve the tedious monotony of high walls and blank building facades. The urban design of the suburb creates a visual, physical and spiritual deterrence to use by walking visitors, with little to support or encourage an extended visit (Section 4.2.6).

The pocket park in the Mermaid Beach precinct is accessed through a car park and is well maintained and cared for by the council, as are the other beach precinct parks. Unfortunately, it has limited capacity and visual connection to the beach and few facilities. On weekends it is often heavily used by the SLSC members who quickly use up the available parking spaces in the precinct by early morning. Access to this beach can be uncertain, as erosion often creates steep sand cliffs which are not easily negotiable by some people (Section 4.2.5).

The governance decisions in the Mermaid Beach precinct favour the reservation of the amenity of views to beachfront residents. The fences prevent the public walking along unmade tracks through the dunes, on the pretext that damage will be done to the natural

environment. However, there are clear, unmade tracks through the dunes from beachfront properties to the beach and no tall bushes and trees obstruct views of the Gold Coast coastline from the beachfront homes. There are also clear, political decisions to allow beachfront residents to plant screening bushes and trees, lay lawns and erect permanent and temporary structures on public land. Council has also located, designed and built the beach access points to limit the extent of visual intrusion into the residents' backyards (Section 4.3.3).

This governance of accessibility situation, in the Mermaid Beach precinct, clearly meets the expectations, preferences and values of the beachfront residents. They can enjoy the views from the comfort of their unfenced back yards, whilst also maintaining privacy to the street side of their properties by erecting high walls and closed circuit television cameras to monitor the few walkers in the streets of the precinct.

The governance of accessibility in Mermaid Beach helped to identify the prime characteristics of accessibility in beach precincts, the nature and quality of views and the nature of the access from the foreshore dune to the restorative natural environment of the beach and ocean. The governance decisions for the allocation of critical transitional space to largely private use and activity in the beachfront transitional corridor in that precinct has limited public access to the beach and ocean. Any visitation which does occur is largely unsupported by public or commercial facilities (Section 4.3.3).

The facilitation of activities by the provision of facilities associated with amenities is the most important governance decision in maximising the benefits of the views and social, recreational and restorative benefits of the public realm for particular user and interest groups. The nature, capacity and location of those facilities is instrumental in determining which groups in society gain the best fit of expectation, preference and value for behaviours and experiences of the different spaces and places found in a beach precinct (Section 4.3).

The Broadbeach precinct has examples of how the provision of facilities can affect the use of a place by their location and alignment to the views and beach access found in the beachfront transitional corridor. The nature, size and profile of the foredune adversely affect the uses and activities in the precinct. In the southern foreshore park (Pratten Park), the beach and ocean are rarely glimpsed from the park, but the resorts along the gateway transitional are all designed to maximise views (Section 4.3.1).

The urban design analysis of all the beach precincts identified the importance of visual and sensory distances in recognising the choices available for activity, related to amenities and facilities. The routes to activities, amenities and facilities also need to be clearly understood. Burleigh Heads emphasises the benefits of clear views to the beach and ocean from the built environment and the effects on the senses of the sounds and odours from traffic along the Gold Coast Highway (Section 4.3.2). Mermaid Beach emphasises the way that erecting beachfront buildings along the dune crest conceals and disrupts the visual and sensory connection and segregates public spaces from the beach and ocean (Section 4.3.3).

The visual and sensory distances combine to produce a 'sense of extent' of the public realm. This is constructed and perceived within the limits of the different senses and provides a degree of detail and interest to the walking visitor. By using the distances of immediate location, theatrical, spectator, distant and horizon, the walking visitor is able to make sense of the local environment. These sensory distances allow the visitor to understand movement and activity permissions. The transitions from one form to another are perceived as open, closed or conditional, as are the activities and routes they can take to fulfil their needs, expectations and preferences of visitation (Section 4.3).

The effect on visitors of the 'sense of extent' from the transitional locations is explained in the urban design analysis and field observations (Chapters Four and Five). These observations and analysis explain the sense of enclosure, permeability and openness of the sensory and physical connections of those locations. They also explain the limits to use and activity which people are likely to recognise as open to them (Sections 4.3.1/2/3).

The political governance decisions that largely determine accessibility are those that are made to favour particular uses and activities and that align the spatial orientation and allocation of the public realm within the natural and built environments to those functions and purposes. In turn, they determine the nature and quality of the social, recreational and restorative beach precinct environment and the diversity of activities that are permissible at any given location, especially in the transitional corridors spanning different environments.

This thesis demonstrates that, when focused on the peak attribute of walkability, the prioritisation of the urban design principles of governance and accessibility is critical in allowing egalitarian access to the beach precinct. In turn, a walkable environment allows the diverse activity preferences of different groups of people to be met at human scales of perception to meet physiological and psychological needs. Visual extents established itself as

an attribute of beach precincts that is essential for those needs in the design solutions adopted for them.

The analysis of visual extents, governance and accessibility tended to indicate that these are the primary urban design attributes and principles of good urban design in a beach precinct. If there are flaws in achieving the desirable associated values of these principles, then the other attributes and characteristics that cascade from them are less relevant. The general urban origin of those attributes and characteristics which define the selected design principles of governance and accessibility can be seen to apply to beach precincts, as much as New York or Amsterdam city streets.

7.1.2 The Analysis of the Beach Precincts as Inviting, Secure and Comfortable

The initial selection of the urban design principles of human scale and need and diversity for the analysis of beach precincts were intended to address subsidiary question four (Section 1.7). However, when using the attributes and characteristics of the selected urban design principles of human scale and need and diversity in the urban design analysis, problems with the attributes and characteristics which formed these principles started to become apparent. One issue was the problem of repetition and clarity in the analysis when applying these principles.

It is thought that this is due to the very inter-dependent and inter-changeable relationships of the different attributes, characteristics and values of urban spaces and places. As nearly all the urban design attributes and characteristic of these urban design principles originate in analyses of cases of development that have different urban forms and purposes from the beach precinct, it is proposed that they do not match the intent of use of those precincts.

An urban design construct was created based on the proposition that the set of decisions people make in visiting beach precincts are not related to the way urban design guidelines have originated. The guidelines have ordered the attributes and characteristics of urban design from a general urban perspective. The attributes of a restorative, diverse beach precinct that meets a diversity of human needs at a walking scale were reconstituted into the urban design principles of inviting, secure and comfortable (Section 4.4).

In reordering the attributes of diversity, human scale and need with the values of restorative place, it is possible to conduct the analysis of the beach precincts in a way that values the urban to the natural environments as a special case of development.

As Gray (2006) observes, the design of the seaside has always responded to its unique location to meet changing social and technological fashions. It is also clear that people's attraction to particular places, such as the transitional corridors, locations and edges, has produced unique seaside architecture such as piers, pavilions, foreshore parks, promenades and esplanades.

The beach precinct has a different purpose to general urban destinations, and the special spaces and architecture are focused on the transitional corridors, locations and edges to meet the particular social, recreational and restorative needs of residents, tourists and visitors.

When considering the urban design principle of 'inviting', the barriers to use by different groups are visual, physical and symbolic (Carr *et al.* 1992b). As Bentley *et al.* (1985) remarked the built environment is a political system of barriers. In beach precincts, the barriers are also the way by which dominant groups allow and distribute the benefits of the transitional corridors between the natural and built environments.

When fences are erected, buildings are sited or dunes are planted they reserve transient, semi natural environments for different political agendas. In the Gold Coast beach precincts, political governance decisions have been made that affect public access by fencing dunes, ostensibly as coastal protection or environmental measures. However, they change the parameters of permissible use and activity and the quality of the visual, physical and spiritual connection of access from beach-ocean is affected (Section 4.4).

In the Broadbeach precinct the degree of invitation is very conditional on where you are and in which direction you are facing. The fenced dunal plantings along the foredune visually disconnect the access from the beach and ocean. The Robert Gatenby Boardwalk is the most idyllic and inviting location in the precinct. However, most of the people visiting the boardwalk choose to pause, sit or stand for only a few minutes to look out across the beach and ocean, and then leave.

This location is not particularly comfortable. People using the boardwalk to access the beach are exposed on the boardwalk by its dune ridge location and have no private, screened or out of the way place to dry off and change to street clothes after showering. Activity on the beach and along the shore is obscured by the dunal profile. Public infrastructure to support extended stay is at a distance and out of view. The shared paths and lack of suitable lighting at the

location detract from the sense of security and make the boardwalk a potentially dangerous place at night especially for members of the constituency of disadvantage (Section 4.4.1).

In Burleigh Heads the 100m section of the park between the Burleigh Heads SLSC and the children's playground is a very small part of the entire Gold Coast coastline, but it is the most heavily used space for movement and activity of all the locations studied (sections 5.2.2 and 5.3). This is attributable to the direct sensory connection to the beach from the adjacent foreshore park and beachfront traverse path. The path has no barriers to stepping directly onto the beach or to sit along the path, view the scenery and watch people engaged in beach and ocean activities.

This ability to connect directly to the restorative characteristics of the location makes Burleigh Heads the most inviting location of the study. It is also secure and comfortable, as it is visually and physically connected and proximate to facilities supportive of extended stays. Its only negative characteristics are related to shared path use, some features of the plantings and lighting conditions at night (Section 4.4.2)

Mermaid Beach is an uninviting destination that is entirely a product of a suburban residential design favouring residents and, in particular, beachfront residents. Although the pocket foreshore park is attractive, it is hidden by the nature and design of the surrounding residential development. The streets in the precinct are long and straight with uninteresting streetscapes. They are dominated by asphalt, concrete, render, fences, walls, driveways, homes with blank facades and small windows facing the street, power poles and weekly waste bins, all failing to support the needs of a walking visitor. The lack of visual interest is reinforced with poor pathways, very little shade or shelter and nowhere to rest along the roads.

The transitional edges of public to private/commercial are uninviting with the exception of the sole café in the suburb. The Mermaid Beach SLSC is marked by an imposing façade and first floor facilities that deter use. The residents of the suburb in walking distance of the pocket foreshore park and Mermaid Park have a degree of access which is supplemented by the ability to use their homes for supportive functions. Walking visitors from outside of the beach precinct are limited to the SLSC building, the pocket park and the café to support extended stays and are not encouraged by the design of the streets of the suburb to stray beyond these facilities.

Of all the beach precincts studied, Mermaid Beach in particular tends to discriminate against the constituency of disadvantage identified in this thesis as children, carers, seniors, socially, economically, perceptually and mobility-impaired people, women, particularly older women (Section 5.5.2) and, in the context of the Gold Coast, all those people who live in inland and hinterland suburbs (Section 1.5.1).

There is a lack of diversity in the design of the beach precincts of the Gold Coast. The provision and location of facilities associated with amenities uniformly favours the same constituency of advantage in every precinct studied. There is little to differentiate the different publically accessible beachfronts and not much attempt is made to cater for the different needs of the constituency of disadvantage, particularly women and older people.

Burleigh Heads is responsive to its natural environment in the area around the SLSC (Section 4.5). However, north of this area, in Broadbeach and Mermaid Beach, the needs of special interest groups have led to a type of beachfront design that is not responsive to the most valued features of a beachfront. Direct views from the foreshore and inland to the beach and ocean, and places to relax in proximity to those views or promenade along the edge of the foreshore are more difficult to find (Section 5.4.2).

The most important spaces and places in the beach precincts, as identified by the typological and urban design analysis, are the transitional locations and edges located in the transitional corridors between built, private, public and commercial, access and natural forms. It is important that the allocation of public and private infrastructure supports use and activity aligned to naturally occurring amenities in those spaces and places.

Historical governance decisions continue to have an effect on choice and opportunity of use and activity long after they are made if they have a physical form, such as the design of the street frontages of resorts opposite the foreshore park. These resorts disconnect the private properties from the public realm and provide no commercial infrastructure to support visitation and activity, except for tourists who are staying there (Section 4.5).

Social activation of a location occurs by meeting the needs and preferences of visitors for public access to beach activities and views along the coast and to the ocean. The most active public places are those with comfortable and inviting facilities that support safe use and activity in the precincts, with clear beach and ocean views. This is seen in Mermaid Beach at

the pocket park, in Broadbeach at the Robert Gatenby Boardwalk and in Burleigh Heads by the children's playground (Section 4.5).

Chapter Five examined how people actually used the places that the typological and urban design analysis identified as important. More generally, the public preferences for activity, amenity and types of development were examined.

This inquiry into public expectations, preferences and values of beach precincts was extended by content analyses of articles concerning public access to beaches and the Oceanway project, and by a Delphi group inquiry into the opinions of professionals in Chapter Six. The findings from these analyses and inquiries are considered in the following sections.

7.1.3 The Analysis of Different Types of Activity Patterns in the Beach Precincts

The relationship of the facilities and amenities to the type and frequency of visitation, activity and behaviour was investigated to build an understanding of how the design solution of the locations affected the way people use them (Chapter Five). The field observations also collected demographic and social data of those people engaged in activities and identified them broadly by age and gender, who they were with, what they were doing, where they were doing it, where they came from and where they went (Section 5.1).

The activities fall into four broad classes: different forms of movement, different forms of activity off-path, and different forms of activity in or on public facilities, and activities in open spaces (Section 5.1). Activities often occur in clusters and are associated with particular characteristics, such as clear view lines, and facilities, shade and bench tables which are sited to take advantage of views for sitting, eating, drinking and talking. When mapped, patterns of movement associated with the spatial arrangement of the different typological elements, as well as buildings, facilities, amenities and pathways, were revealed.

The Burleigh Heads precinct has the most visitation and diversity of activity of the three precincts, followed by Broadbeach; Mermaid Beach has significantly less. Walking, including walking the dog or pushing a pram, is the most common movement activity at around 85% in Burleigh Heads and Broadbeach. This rate drops to 78% in Mermaid Beach and is associated with an increase to 20% for cyclist movement from around 11% in Broadbeach and 9% in Burleigh Heads (Section 5.2)

In Broadbeach there is some evidence that walking in the precinct is largely for exercise purposes. Even with the largest foreshore park space of the three precincts studied, Broadbeach has few walking routes (section 5.2.1). The mapping of movement activities tends to indicate that most pathways are used as one-way routes with some places acting as turn-around destinations (Section 5.2.1).

The relatively low incidence of people pushing prams in Broadbeach in comparison with Burleigh Heads may indicate that there may be problems for carers with young children. This may be due to the width of the soft sand and sand cliffs from the boardwalk to the hard sand and ocean. There may also be difficulty in accessing the beach from the distant public transport stops and a lack of suitable parking. It is also possible that the visual and physical disconnect between the beach and the parkland caused by the fenced dunal plantings may limit activity and supervision options for carers in the foreshore park (Section 5.2.1).

In Burleigh Heads there are clearly defined routes along the traverse and transect pathways and most people use them. The spatial compactness of views, destinations, facilities and amenities and a lack of visual and physical barriers on the beach side of the Gold Coast highway make navigation relatively easy, although the highway divides and controls route-ways from the built form to the beachfront (Section 5.2.2).

The nature of use and visitation in Burleigh Heads clearly meets the needs of different users and interest groups. The colocation of facilities and amenities in a relatively compact space along the traverse promenading pathway allows a density and diversity of use and activity not found in the other precincts of the study.

This situation is especially true of the children's playground beach access location (BRBA2). People of different ages can easily transition from park to beach with no significant visual or physical barriers. Family and friends groups of different ages can all engage in activities of their choice whilst remaining in visual and aural connection with each other. Supportive facilities for extended stays are also clearly visible with clear routes to them from the location within a two minute walking distance (Section 5.2.2).

In Mermaid Beach the relative increase in cyclist movements and the reduction of walking, jogging, dog walking and pram pushing is associated with the lack of facilities and poor connections to amenities. The lack of desirable walking routes along the foreshore and in the unpleasant streetscape, the limited allocation of space to public use and restricted activity

choices, constrain the desirability of the precinct for non-residents. The traffic, street design and parking all combine to give a 'not welcome' message to non-residents. The one pleasant space of the foreshore park is small, fenced in, partially disconnected from the beach and quickly becomes crowded especially during SLSC events (Section 5.2.3).

We have looked at the way the design solutions found in the different beach precincts and transitional locations affect choice and opportunity for diverse activities in the movement corridors, open spaces and facilities of the precincts. We now turn to the ages and genders of the individuals and groups who are using the beach precincts. This will contribute to the understanding of who is visiting and using the different locations in the beach precinct, what they are doing and, by implication, the preferences for the use of the facilities and amenities of different demographic groups associated with different locations.

7.1.4 The Patterns of Social Activity Related to Locations by Age and Gender

By comparing the incidence and frequency of activity with the age and gender of the individuals and social groups observed using the different locations in the beach precincts (Section 5.3), some evidence was gathered to consider how well the existing urban design of the public realm of different types of beach precinct meet the preferences and values of different users and interest groups (Subsidiary Research Question Four).

The use of the same observation points in each of the beach precincts allowed the type and frequency of activity and use found at the locations to be reasonably linked to the elements of the typology. The inferred preference for location, facility and amenity found at these locations could then be considered. This layered research process identifies the value of particular locations in the public space by linking the physical features of place to the activities, functions and meanings of that place (Relph 2006).

The observations gathered information on the age, gender and social grouping patterns of people using the beach precincts. The assumption made in choosing late morning and early afternoons for the observations was that it would avoid the early morning and late afternoon surges of activity that occurs in the precincts. Large numbers of people walk, run and cycle and physical training providers use the beach precinct for fitness class purposes (Elder 2013).

The chosen hours for the observation were expected to be used by a wider demographic group for more diverse purposes. In conducting observations during school hours it was expected to affect the incidence of school age children using the beach precinct, but this was

thought to be an acceptable as a single researcher could only cope with limited movement volumes (Section 5.2).

Prior to the observations it was also anticipated that younger adults, adults and males would be less prominent than older adults and women, as the first group are likely to be working and the latter can be expected to take the quieter part of the day to enjoy their leisure time at the beach. However, the observations revealed that the pattern of age and gender visitation was largely the opposite of this expectation (Section 5.2.5).

There is a male prevalence in visitation distribution in all demographic categories from young to older adult, with the most marked variance from the Australian distribution amongst adult and young males respectively. There are fewer adult women and markedly fewer older women than the Australian distribution would indicate, and more young women than could be expected. Adult males, at just over 20% of the Australian age distribution, made up around 34% of the observed users of the beach precincts studied (Section 5.2.5). It is likely that if the observations were repeated during the peak exercise periods that this disparity in distribution would be even more emphatic.

The pattern of overrepresentation of young males and women and adult males is repeated in the recorded incidence of cycling as an activity. For this activity there is even less participation than for beach visitation by adult women and older males and women in the beach precincts, than would be indicated by their distribution in the Australian age population (Section 5.2.5).

The observations were also examined to reveal the social patterns of visitation. The analysis revealed an adult male dominance of the beach precinct, both as an individual and in membership of the group structures. This appears to indicate that beach precincts are an adult male domain. This may also be reflected in the way males make use of the beach precinct and the influence they have and have had over the design of public and private spaces, and in the provision of amenities and facilities in beach precincts. Their dominance in the design, planning, building, and governance professions, particularly in the senior and decision making roles may be responsible for this (Todes, Malaza and Williamson 2009; Mathewson, Stead and Burns 2012).

The patterns of social visitation also indicated that older women visit more frequently as an older couple group or as part of other social groupings and only rarely as an individual. These

findings suggest that older women prefer going to the beach in a perceived safe, social group. Improved perceptions of safety may be an important factor in designing future strategies to encourage older women to visit beach precincts and other places. The adult male and female couple were the dominant group of walkers. Visitation within generational groups was the most common social grouping. Groups with children were the largest category after couples and individuals.

Groups with more than three members are more likely to be intergenerational and the group structures that included children tended to indicate young and adult women take most responsibility for the visitation of children, with adult males playing an often supportive role. Younger and older adult males appear to be the least important component of the social grouping for child care in the beach precincts. It was also noted that intergenerational groups were more likely to be involved in activities other than movement and using facilities and open spaces off path.

All these findings have implications for the design and management of beach precincts that need to be further investigated so that the spaces and facilities match the preferences and needs of visitors. Missing demographic groups can then be encouraged to access the social, recreational and restorational values of beach precincts (Section 5.2.5). We now move on to examine the observed relationships and patterns of activity with amenity and facility.

7.1.5 The Relationship of Patterns of Activity with Amenity and Facility

The field observations examined the relationships and patterns of different types of activity with the amenities and facilities found in the transitional locations. They also revealed the most and least active locations and precincts. The pattern of movement to activities other than movement was found to have a ratio of around 3:1 in the beach precincts studied. The age, gender and social pattern of movement to activities other than movement was found to differ by location and precinct. Larger groups and children are more commonly observed to be engaged in activities other than movement (Section 5.3).

It can be seen from the data that movement, mostly along pathways, is the dominant form of activity followed by activities in space or place and activities accessing amenity, facility or spaces. Walking is the dominant movement activity and the patterns of activity and social groupings suggest that the most preferred use of a beach precinct is for going for a walk as a social group, for recreational and restorational use. The pattern of individuals, couples and

groups engaged in activities other than movement is different from the pattern observed in movement and would appear to be largely attributable and related to children's play activities in the beach precinct, in intergenerational groups (Section 5.3).

The patterns of movement and activity in the different beach precincts identified the most and least active precincts and locations in those precincts. Burleigh Heads was found to be nearly twice as active a place as Broadbeach and four times as active as Mermaid Beach from the incidence of activity observations. Burleigh Heads achieves this level of activity despite having a smaller foreshore park than Broadbeach (Section 5.3.1).

The data also suggested that there are different types of relationship between movement and activity other than movement with amenity and facility at different types of transitional location that may be a useful subject of inquiry in future research. These categories were seen as:

- Walk to and **stay for a while** destination locations, having a pattern of movement to activity ratio of around 3:1.
- Walk and **pause** locations with a **promenading** or taking a leisurely walk function having a pattern of movement to activity ratio of around 6:1.
- **Walk-through** locations to distant destinations having a pattern of movement to activity ratio over 8:1. Where the location is at a key transition from built-to-access or access-to-beach form, the location also has a **gateway** function (Section 5.3.1).

These ratios need further investigation to test the relationship, but it is interesting that they may be capable of being extrapolated to provide useful categories of place within and beyond the beach precincts. It is also of interest that the precincts in general have a pattern of movement to activity ratio of 3:1 indicating they are 'stay a while' destinations and this proposition is further supported by the visitation preferences expressed by respondents in Section 5.4.2.

The different relationships between incidence of movement and activity and location also tend to indicate that the most used and diverse places are where people were seen to stay in place. This category of place was also linked to a higher incidence of movement and indicates that the more people who are travelling past facilities and amenities, the more active those places will be (Section 5.3.1).

None of the stay-a-while or pause/promenade categories of movement and activity applies in the Mermaid Beach precinct. It has no traverse path in a foreshore park and a low to null incidence of movement to activity in the precinct. The urban design of the precinct created a different type of relationship, with the public facilities and amenities being destinations in their own right. They did not have a viable local walkable destination network nor connect easily between the destinations that existed (Section 5.3.1).

When the movement observations were compared with the findings of the typological and urban design analyses, connections between the levels of movement and activity could be related to the governance of accessibility, amenity and facility. The observations made by Bentley *et al.* (1985) about the built environment as a political system of barriers were corroborated. The appropriateness of the principles adopted for the urban design analysis was underscored, in that the most active places also had the best design ratings (Section 5.3.1).

The match between the category of activity and the urban design solutions meeting human functional needs was most clearly demonstrated at the most-and least-used locations. The quality of connections to other locations and the nature of the transition from one form to another can also be recognised as permitting or denying preferred activities and use. The obvious example includes the cyclist-preference shared paths, which encourage cycling but discourage and relocate activities other than movement to more distant off-path locations (Section 5.3.1).

Other deterrents to activity include overlarge open spaces and too much distance between destinations, low levels of public space detailing, dunal plantings, parking, roads and traffic crossings, street frontages, fences, steps, the location and design of toilet blocks, lack of signage, blocked views to the beach and ocean, lack of changing facilities, showers and the distance to public transport stops. All these deterrents to activity can be found in different combinations at locations in the beach precincts (Section 5.3.1). The characteristics that encourage the use of locations for diverse activities include the proximity of different amenities and facilities and the quality of the visual, physical and spiritual connections between destinations and to the natural environment (Section 5.3.1).

The field observations also identified patterns of activity that could be associated with accessing facilities and amenities (section 5.3.2) as well as activities that were associated with spaces in the beach precinct (section 5.3.3). As could be expected, these activities are dependent on the existence of the appropriate facilities. For example, using the viewing area,

shade trees, showers and other activities are available to all users of the different beach precincts but waiting for a bus can only be observed in Burleigh Heads (Section 5.3.2). The highest incidence of accessing amenity was using a shade tree, followed by being on the beach. Using facilities was also observed to be associated with the presence of shade. Seats and tables in the sun were less frequently utilised than those in the shade.

Activities were also observed to go together. Open grassed spaces in the shade were associated with viewing, watching others, sitting, standing, lying down, playing, talking and reading. People drinking, eating, sitting, viewing, watching others, talking and reading were often associated with seats and bench tables in the shade. Watching others and viewing takes place on facilities like viewing platforms and seating, but it also occurs whilst walking along the pathways. It is most commonly observed in locations associated with the restorative nature of the beach precinct (Section 5.3.2).

Watching and viewing was also observed to be related to facilities like a tree to lean against whilst standing. Interestingly, people appeared to use seating with their backs to busy pathways as long as the attractiveness of the views overrides the inclination people have for a quiet, partly enclosed shaded place to read. Lying down and reading were only observed in locations that were inviting, secure and comfortable and often associated with extended stays in place (Section 5.3.3.).

7.1.6 The Analysis of People's Preferences and Expectations of Beach Precinct Visits

The intercept and online questionnaire was structured to gather information on people's preferences, expectations and associated meaning of beach precincts in order to build on and complement the field analyses and observations of behaviour. Its purpose was also to gain a general understanding of the meaning people associate with a beach precinct visit.

The questions were related to other research into beach visitation and use by Powell and Muldoon (2005), Raybould and Lazarow (2009) and Oh, Draper and Dixon (2009). The questionnaire responses had areas of commonality, difference and distinctiveness to those other sources. However, the correlation of the responses within the questionnaire and the other sources suggest a degree of validity for the responses to the questionnaire (Section 5.4).

In common with these other research sources, the majority of visitors to the beach precinct originated from less than 10 km from the precinct, with beach suburb residents being the largest single group. There were relatively few respondents from beyond Queensland and

New South Wales. Visitation origins suggest that designing beach precincts specifically for tourists may be a poor policy direction. When compared with other sources, the typological and urban design analyses and field observations, Burleigh Heads was found to be the most popular destination of the case study areas (Section 5.4.2).

The responses to the questionnaire indicate that beach precinct visitation preferences are for visits between one to four hours with varying incidence of visit favouring daily, weekly or monthly visits, with a significant group only visiting rarely (Section 5.4.2).

The reported primary purpose of visit to take part in activities such as to be outdoors, walk on the beach, relax and unwind, socialise with family and friends (Section 5.4.2) is also similar to Raybould and Lazarow's (2009) findings, and was confirmed by the field observations (Section 5.2). The responses in the different surveys also suggested that how and where people complete questionnaires will affect the nature and content of responses.

The place values which appear to influence peoples preferences for beach precinct destination include the views available in the precinct, the amenities, the friendliness of the precinct to children and dogs, the adjacency and presence of nature, clean and well managed public infrastructure and easy parking (Section 5.4.2).

Walking and relaxing are seen by questionnaire respondents, and from the other author surveys, as activities in their own right and are the primary reason for visiting beach precincts. In terms of personal values, respondents go to the preferred beach precincts for personal and social enjoyment because they are attractive, quiet, provide stress relief, allow people to recharge or refresh their personal batteries and possess an emotional, familial and historical connection (Section 5.4.2).

Walking and relaxing as primary purposes of visit are very clearly expressed in all the surveys consulted and are clearly compromised by activities such as shared path use, as this detracts from enjoying a relaxing, leisurely, social walk. The combination of walking and relaxing as a purposive use of beach precincts is also strongly indicated by the other surveys, the typological and urban design analyses and the field observations (Section 5.4.3).

Swimming, as an activity preference for beach precinct visitation, is prominent in the questionnaire responses and the other surveys. However, the preference is not borne out by field observations which found that, in the two precincts with foreshore parks, the majority of people observed were in the park, fewer on the beach and even fewer in the water (Section

5.3). It is thought likely that when people mention swimming it is because of its strong association with the meaning of the seaside. They may also mean paddling and playing in the ocean (Section 5.4.3).

The facilities with the highest ratings from respondents represent attributes of personal comfort, safety and convenience that would be supportive of a beach precinct visit. They are restrooms, parking, shade trees, showers and security (Section 5.4.3). When combined with Raybould and Lazarow's (2009) survey responses, this can be elaborated to include cleanliness of the foreshore park, beach and ocean, crowding and concerns over vandalism and theft.

The high value people place on parking in all the surveys indicates that accessibility in car-dependent cities is also dependent on the provision and cost of parking. This has particular implications for urban design and planning strategies when considering those residents who live beyond walking distance or with poor public transport options.

The next set of facility preference responses can be considered generally important to beach precinct visitors and support public accessibility and social activity. These include the SLSC, public transport stops, picnic areas, lighting and public barbeques. This indicates preference for facilities that support high social and low level physical activity, but not high impact physical activity. The preference for social and low physical impact facilities are also indicated in the other surveys consulted.

The low level preferences indicate some interest in seating, cafes, cycle racks and children's playgrounds, with little or no interest in exercise equipment, ice cream parlours, amusements, bars/pubs or retail (Section 5.4.3). It is thought that this reveals that people's preferences are based on meeting fundamental needs first and that other facilities are useful to support some people's preferences, but not others.

It is thought that the responses to the questionnaire, which are similar to the preferences found by Raybould and Lazarow (2009) for activity and facility may also indicate Australian cultural preferences for beach visitation. These are seen as differing from other countries by being self-contained visitors, bringing their own food and drink and requiring few of the amusements and supportive commercial facilities a European visitor is likely to expect. This also has implications for the design and planning of beach precincts, as cultural preferences

for visitation may affect the expectations of people from places other than Australia and that the urban designs of Gold Coast beachfronts may not fit the expectations of overseas visitors.

The preferences expressed in the questionnaire for regulation and control of beach precincts are, however, similar to those found in research conducted by Oh, Draper and Dixon (2009) into multi-attribute preferences for beach visitation in South Carolina. Oh, Draper and Dixon (2009) found that younger and male tourists were more likely to participate in beach precinct visits than older and women tourists, which concurs with the field observations of this study (Section 5.2).

The focus in Oh, Draper and Dixon's (2009) study was on the attributes of beach access, which in American terms includes parking and restroom facilities as well as beach access points, crowding and noise levels in the different beach environments, rules and regulation for pets, alcohol, vehicles and fishing and finally levels of development along the beach, in particular high to low rise hotels, apartments, restaurants and retail.

The questionnaire indicated that Australians would prefer to pay nothing for parking, whereas both Americans and Australians will tolerate around \$5 a day but are deterred as rates climb. Charges of \$10 and above were found by Oh, Draper and Dixon (2009) to positively deter visitation.

Australians appear to prefer foreshore parks and boardwalks and oppose beachfront development (this was not asked in the South Carolina study) whereas Americans prefer moderate levels of commercial development in the beach precinct to support visitation. Americans prefer some restrictions on activities and behaviours but they do not like high visibility rules and regulations. Similarly, Australians have different levels of support for restrictions on alcohol, dogs, skateboarders, street vendors, music, buskers and cycling, although there is also some preference for no restrictions at all (Section 5.4.4).

It is of significance that both the studies consulted appear to support the notion of the beach precinct as an accessible, relatively quiet, uncrowded, safe, inviting and comfortable place with a preference for the attributes of the natural environment and a level of commercial development just sufficient to support visitation (Oh, Draper and Dixon 2009; Raybould and Lazarow 2009). This has particular implications for beach precinct development as the three foreshore park destinations in the Gold Coast are probably at the limits of 'fit' to these

identified attributes on many weekends, and probably beyond them during peak holiday periods.

This situation might affect the level of response and interest in further development of beach precinct facilities and the encouragement of more activities into an already busy public realm. The most common response of those who did respond to the question regarding the promotion of beach precinct activities and facilities was to 'leave it alone'. Gardens, seating, waterparks and children's playgrounds could enhance enjoyment for some groups.

Extending the walkable public realm by integrating existing car parks into the design of foreshore parks and the provision of boardwalks, piers and jetties could reduce overcrowding in some foreshore parks (Section 5.4.4). It is also clear from the responses that the design and provision of detailed public spaces in the beach precinct needs to be closely associated with the mental health values of relaxation, peacefulness, happiness, wellbeing, and refreshment (Section 5.4.5).

The questionnaire responses indicate that people's relationship with the beach precinct is centred on an interpretation of the seaside as a quiet place to recover from the stresses of daily life and that relaxing in a happy, stress-free, natural environment is a very high priority for people visiting beach precincts. If these core values, associations and relationships of people with beach precincts are compromised to meet the activity desires of particular special interest groups, then urban designers and planners will create a beach precinct that is less able to meet the needs of other users of the precinct.

The next two sections will examine and compare the values and preferences held by members of the public and built environment professionals for the appropriate urban design and planning of beach precincts (Section 5.4.5).

7.1.7 Public Opinions on Beach Precinct Use and Design

Different individuals, groups and professions can be seen to attach different names and meanings to the same location. This became apparent when determining the boundaries of the research, defining the typology and urban design terms and especially when inquiring into the meanings that different people attach to particular places. For the researcher, the beach access point near Kurrawa SLSC is a key transitional location. For many it is a place to view the beach and ocean; for SLSC club members it may be the Robert Gatenby Boardwalk; for

others a place to play beach volleyball. This same location has multiple and layered meaning for different people.

This situation can make a place a rich place with a unique *genius loci*. It can also cause difficulties in understanding that place, as, whatever the research indicates a place to be, it will not be true for all people. However, this does not detract from the need to seek to understand how people expect and prefer to use the beach precinct. These expectations and preferences will be associated with the range of meanings of place it may possess for different individuals.

However, without an understanding of the range of meanings that places have, it is not possible to design for the best use or function of those places. In respecting the diversity of meanings, it is also thought necessary to establish the essence or commonality of the values of place. These meanings are not to be considered essential to all, but they may be shared by many. By exploring different opinions it is thought possible to build a layered, interrelated and holistic understanding of different people's meaning of place and how they might use that place to meet their expectations and preferences for individual, social and cultural behaviours (Section 1.7).

Chapter Five investigated how people were observed to use the beach precincts. It began an inquiry into the range of expectation, preference and meaning that people attach to them. Chapter Six extends that research and compares the expectations and preferences for beach precinct use by exploring the values and meanings of the different locations in different beach precincts amongst the different user groups of those precincts, to begin to answer the Subsidiary Research Questions Three and Four (Section 1.7).

There are difficulties in describing, identifying and associating the affective feelings that different people associate with different places. Most urban design theorists avoid or generalise the importance of affective analysis and favour the cognitive and rational approach to the analysis of the relationship of people and place. This cognitive perception of place has contributed to the conflict between 'rational' planners when they are interacting with members of the 'irrational' public in community consultations (Kartez 1989).

However, people are only partly rational (Byrne 2005). Beliefs and opinions are important in making decisions about the way people use places and form the expectations and preferences they have for appropriate activities of place. This is evident in many of the political decisions

made in the cultural construction of beach precincts uncovered in this thesis. The location of beachfront properties by past planners and the associated, and sometimes irrational, conflict over the appropriate use of adjacent public land is but one example of the conflict between cognitive and affective perceptions in decision making.

This thesis has examined this conflict by using mixed research methods. The content analysis conducted in Chapter Six is focused on the meanings and values of beach precincts and how they contribute to understanding the range of rational and irrational opinions of users and interest groups for the best way to design and plan beach precincts.

Research into the meanings and values of beach precincts appears to be surprisingly scant. This is possibly because the beach precincts are places where affectations for the values of place are strong. Layers of evolutionary, biological, emotional, subjective, personal, historical and cultural meanings are associated with the narrow transitional spaces between the built and natural environment. Urban design researchers appear to have shrunk from attempting to explain places that are so loaded with affective meaning.

To further examine the meanings and values of beach precincts, an internet search of informal contemporary literature was undertaken to inquire into the opinions of different users and interest groups associated with beach precincts (Bowler 2010). The inquiry concerning public access to the beach and the construction of new sections of the Oceanway, tended to confirm the intractable nature of the political conflict for control over the governance, design, planning and use of the transitional corridors found in the different beach precincts. This conflict was largely concentrated and located in the beachfront transitional corridor along the foredune (Section 6.1.1).

The localised, political conflict is in many ways a microcosm of the global struggle over the use and distribution of important benefits and resources found in the wider society (Graham and Aurigi 1997). It is evident that many of the same conflicts exist in the design and planning of beach precincts, as in other public realms, between the application of wealth, privilege and influence of a small dominant group in society and the less powerful members of that society (Section 6.1).

The focus for a series of conflicts for control over the use, design, planning and management of beach precincts are localised in the identified transitional corridors at transitional locations. These conflicts for control of space are pervasive and not limited to the Gold Coast beach

precincts. The research indicates that they are a matter of local dispute in all the beach precincts analysed in the public access articles. The only difference in the nature of the conflict in the different jurisdictions examined is where the boundaries have been drawn between land, beach and ocean and the rights of the public to access that beach in the relatively unstable, coastal environments (Section 6.1.1).

Conflict over public access to the beach is about two spatial arrangements. These are either a public foreshore space or privately owned beachfront, located in the beachfront transitional corridor. The nature of the conflict is dependent on which spatial arrangements it is. If there is a public foreshore, the conflict will be about the transition from land to beach and which groups can activate their use and activity preferences by the allocation of space and infrastructure. If there is private beachfront, the nature of the conflict will be about the public permission to access the foredune or beach adjacent to those properties and the allocation of space and infrastructure in the adjoining built environment to enable public use of the beach precinct (Section 6.1.1).

It would appear that any decision to grant private property rights in the beachfront transitional corridor between land and beach guarantees enduring conflict and costs to the wider community. The provision of beach protection and restoration for privatised beachfront is necessary in an environment which is exposed to risk from severe weather events and climate change because the public beaches either side of private beachfronts have to be protected. However, the cost of that restoration and protection does not necessarily come with sustainable or egalitarian public access to the beaches (Section 6.1.1).

The locking away of half of the Gold Coast beachfront for mostly beach suburb resident use, whilst at the same time increasing crowding on the public sections as local and regional populations continue to rise, will reduce the attractiveness of those public sections. It is very likely to increase conflict for the control of the beachfront transitional corridor and further marginalise and alienate the constituency of disadvantage (Section 6.1.1).

The content analysis of two sets of articles concerning the political conflict surrounding the urban design and use of the beachfront transitional corridor along the foreshore addressed two important issues that have arisen about the urban design and planning of the spatial and physical relationships of beach precincts. The first issue is the appropriate purpose, use and design of the beachfront transitional corridor itself (the Oceanway articles) and the nature of

the transition across the corridor from access form to the beach and ocean (the public access articles) (Section 6.1.2).

Both sets of articles addressed local issues with global dimensions. The variations in the narratives for each local story were related to the decision making processes of different levels of government from local to state to commonwealth. The conflict about appropriate access, use and activity is contained within local, regional and national, cultural, political perspectives. The dominant, project and resistance groups always purport to act in the public interest (on behalf of the passive group) and deployed a range of economic, environmental, legal, public health and social arguments for the provision of public and commercial infrastructure supporting their preferences for access, use and activity (Section 6.1.2).

The Oceanway and public access articles were also used to infer preferences for the attributes and characteristics of the selected urban design principles. The analyses clearly indicated that authors and commentators alike are aware that it is the political decisions (governance), usually made by local councils, that allow or deter public access and use of beach precincts (accessibility). This is reflected in the frequency of the comments that could be attributed to these principles (Section 6.1.3).

The frequency of coding of the texts to urban design attributes and characteristics needs to be understood in the context of the articles. The public does not employ a built environment lexicon in discussing the governance decisions for the provision of supportive commercial and public infrastructure to enact their preferences for access, use and activity in beach precincts. Instead, they describe individual relationships and associations for the preferences for the physical attributes of public access, the need for facilities to support activities and access to amenities and environments which motivate and sustain visitation (Section 6.1.3)

In particular, they do not use professional terminology like governance, diversity, human scale and need in articulating their preferences, but they do discuss issues relating to the governance of accessibility. This supports the findings of the typological (Section 2.4) and urban design (Sections 4.1,2,3,4) analyses and the field observations and public inquiry (Chapter Five) that the urban design principle of human scale and need is contained within a narrative of the values of design that allow people to meet their needs and desires (Section 6.1.3).

Having examined the opinions of the public for the preferred access, use and activity in the urban design of beach precincts, we now move towards a consideration of the opinions of built environment professionals and representatives of activity and environmental groups.

7.1.8 Professional Opinions on Beach Precinct Design, Development and Use

Chapter Six also explored and compared the expectations, preferences, values and meanings of official representatives of user groups and built environment professionals with particular interests in the use, design and planning of beach precincts. Their opinions were sought in response to questions that were related to the main findings of the research from previous chapters and for Subsidiary Research Question Four (Section 1.7).

The Delphi group members were encouraged to respond in any way they thought appropriate to seven questions about topics that arose in the research, up to the time the Delphi group process was conducted (Appendix E). These questions were intended to:

1. reveal the group's opinions of the appropriate spatial layout and land use of urban beach precincts;
2. explore the appropriate urban design for egalitarian public access to activity, amenity and facility;
3. discuss the appropriate nature of the governance of the urban design and planning of beach precinct development; and,
4. consider the urban design and planning measures that would increase the resilience of beach precincts to severe weather events and climate change.

Although these questions are similar to topics examined in the research preceding the Delphi inquiry, they were constructed to elaborate on the urban design and typological analysis, the field observations and the inquiry into public opinions for the urban design and planning of beach precincts. The questions also sought to reveal the range of meanings of professional preferences and values of the user and built environment to be compared and contrasted to those of the public (Section 6.2.1).

The responses of the Delphi group were largely concerned with governance, urban design and planning, environments, activities and amenities, in that order. They also tended, in the language used and the focus of comments, to reflect the professional training and experience of the respondents. Regulation and control of public access in an environmental context were

a significantly common theme for professionals, whereas appropriate activities and amenities were only touched on in the responses (Section 6.2.1).

The Delphi group responses were very different from the public inquiry respondents who were largely disinterested in the urban form of beach precincts, and instead focused on the purposes of visitation and the preference for facilities and amenities which supported their activity preferences. For example, although walkability was sometimes referenced by the professionals, it is a primary purpose of visit for the public (Section 5.4.1).

Delphi group members were also interested in the appropriate governance of use and activity in beach precincts. In particular, they discussed the appropriate levels of authority for uses and activities that were associated with the limits of the different spatial zones from the natural environment of the coast to the built environments. They were also concerned with the production of strategies, policies and plan to achieve desirable outcomes in line with their opinions (Section 6.3.1).

The Delphi group criticised existing beach precinct urban design and planning and in particular beachfront development as being unsuitable on amenity, climate change, environmental, public access and economic liability grounds. Beachfront development was also seen by most respondents as a very complicated, expensive and an almost intractable, governance problem and as such to be avoided in future (Section 6.3.2).

The effect of incremental, low-level, development, where the small, low impact, beach shack can quickly progress to a multi-million dollar private home, apartment block or billion-dollar resort development, was seen by many of the Delphi group as responsible for current problems in adapting coastal settlements to future climate and extreme weather events. Most responses indicated that development in the principal built form should be dependent on an analysis of the condition and context of the natural environment of the beach and adjacent land forms (Section 6.3.2).

The Delphi group response to the current planning regime in Queensland indicated that permissive planning processes were not in the interests of the community as a whole. Development in beach precincts was argued to require prescriptive controls over development including the nature of the street frontages, building heights and suitable land uses (Section 6.3.2).

It is clear from the Delphi group responses that the transitional corridors, locations and edges of the different forms, private and public are the most important spatial elements of urban design in beach precincts (Section 6.3.3). Human sensory dimensions should also be incorporated into any guidelines for walkable scale development (Sections 3.3.5/4.0.2/3) in order to make a beach precinct inviting, comfortable and secure (Section 4.4).

The nature, design and arrangement of the gateway transitional corridor, locations and edges produced detailed responses from the Delphi group. They favoured a walkable environment with safe attractive pathways and frequent public access to the beach. The Delphi group also elaborated preferences for the nature of the public to private/commercial edges found in this gateway transitional corridor (Section 6.3.2). In contrast, the public held generalised opinions and made few comments about the design of foreshore parks (Section 5.4.4).

In response to existential challenges to the beachfront, the Delphi group were agreed that any beach precinct development should be designed and planned with a conservative line of building permission. There was a marked preference expressed for foreshore public spaces that are under the control of a commonwealth agency to prevent local and state politics creating future liabilities for the broader body politic.

The foreshore public space was considered to be an environmental buffer zone which may need to be created or extended from existing development and incorporated into future development. There was also a recognised need to examine current injurious compensation laws to facilitate future changes to the management of coastal development (Section 6.3.3).

In considering the design of beach precincts, the Delphi group considered the maintenance of outlooks and views from built and access forms to the water as critically important. They also favoured a diversity of recreational and social amenities and facilities that create social nodes aligned to uses which can differentiate otherwise undifferentiated foreshores as an important consideration for placemaking (Section 6.4).

For the Delphi group, the elements, attributes and characteristics of appropriate urban design, in descending order of implied significance, include the typological elements of access form and beach frontage, the principal built form and the spatial orientation of these elements to the beach. The favoured urban design characteristics are the cultural context, natural features and land use with the nature of the pathways connecting the elements and attributes to determine the degree of opportunities and choices for preferred use and activity (Section 6.4).

The only consistent opinion expressed by the Delphi group for cultural values was the universality of the public attraction and right to access beaches. The public attraction was considered to be the aesthetic connection to natural features in the natural environment, the flora and fauna, the sociability of activities, a walkable human scale and an authentic sense of place connected to the local culture, environment and history (Section 6.4.1).

The threats to the sense of invitation to beach precincts were seen as the dominance of economic values in planning and development, crowding and sensory pollution, incremental privatisation of public space and inappropriate commercial gateway transitional corridors and edges (Section 6.4.1). In the opinion of the Delphi group, these considerations would need to be incorporated into any urban design and planning guidelines for future beach precinct development in a prescriptive manner, but without limiting their ability to evolve and adapt to changes to local cultural needs and functions.

There was a degree of dispute amongst the Delphi group members as to the nature of the local Australian spiritual, symbolic and cultural needs. There was some agreement that one of the values associated with Australian cultural values is the egalitarian nature of the beach. Some members wanted the local context and character to be incorporated as a legal imperative to guide the design of public access to beaches (Section 6.4.2). This is also found in the inquiry into public preferences for, and expectations associated with, the meanings of beach precincts (Sections 5.4.4 and .5) and the analysis of public opinion for beach access and development (Section 6.1.3).

There were no specific references by the Delphi group to walking activities. This either reflects a lack of understanding about beach precinct use, a focus on particular professional agendas or a reflection of the identity of the participants. This situation tends to support the proposition that although the professions notionally believe that amenities and facilities should be provided for all socio-economic groups of society, they may not be able to separate their personal preferences of appropriate use of places from designing and planning them (Section 6.4.4).

This is also reflected in the frequency of the Delphi references to amenity and facility. The spatial and commercial concerns of planning appear to dominate the group's narratives, whereas there is little evidence that the public views the beach precincts from these perspectives (Sections 5.2, 3, 4). It is clear that the public differ from professionals in the importance they attach to different types of public and commercial infrastructure, use and

activity in beach precincts (Section 6.4.4). It is also thought that if further research were conducted into the preferences of the constituency of disadvantage identified in this thesis there would be a wider gulf in opinion.

This concludes the review of the findings of the research, leaving the examination of the preferences and needs of the constituency of disadvantage to the research model proposed for further research. We now move on to consider the implications of the findings of research for the urban design and planning of contemporary and future beach precincts, as intended in the research goals of the thesis (Section 1.6).

7.2 Directions for the Urban Design and Planning of Beach Precincts

This section draws together the different strands of the research to present an understanding of the physical elements and meanings of place that people associate with behaviours in beach precincts to meet their functional needs (Canter 1983). The typology of urban beach precincts will be revised to incorporate the findings of the research. Following on from the revised typology, a schema that synthesises the findings of the research will be presented. This schema can be adapted to different beach precincts to produce a preferred spatial relationship of amenity and facility with use and activity. The section will conclude with a proposal for a model for the formation of urban design guidelines and for the production of values-based processes of urban design and planning for beach precincts.

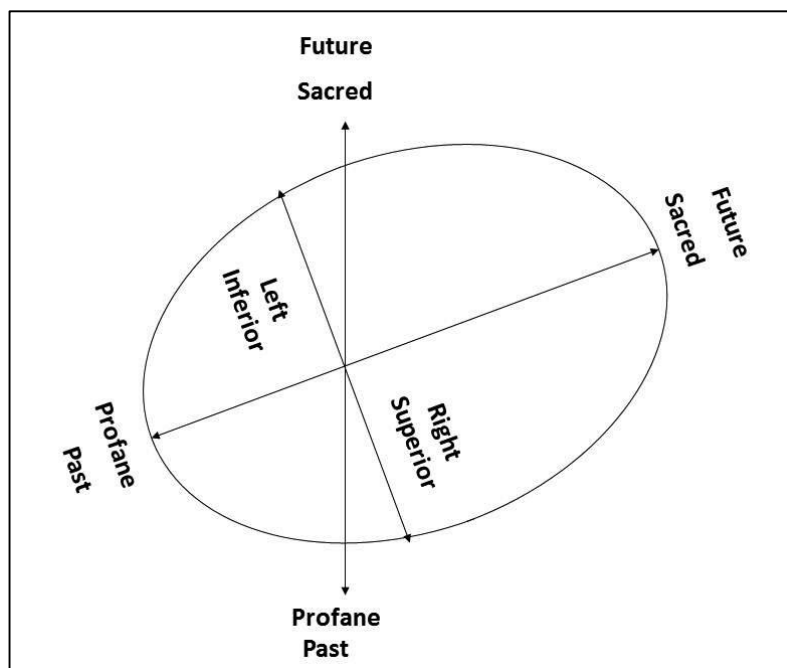
From the inception of the first seaside resort in Scarborough, England, the development of beach precincts has been a narrative of privilege and power in the distribution of the social, health, recreational and restorational benefits of a unique case of urban development (Section 1.3). The seashores have produced a unique form of architecture and urban forms, such as promenades and piers, that are designed to allow people to walk, socialise, relax and enjoy themselves (Gray 2006). These architectural and urban forms are located along and in the transitional corridors, locations and edges described in this thesis.

The alignment of architectural, urban design and planning practice with the creation of public space for place-specific cultural practices is said to arise from the complex interplay of economics, technology, beliefs and politics as a cultural process (Knox 2011). As a result of the research conducted in this thesis, it is proposed that the urban forms of the beach precincts are created by a cultural-political process that allocates space for sacred and profane purposes to favoured users and uses (Tuan 1977, p35).

These place-specific practices are often related to religious or ethnocentric cosmologies (Weinberg 2008), cultural (Tally 2011), gendered (Gal and Kligman 2000) environmental (Graber 1976), scientific (Dawkins 2006), social (Soja 1989), legal (Gal and Kligman 2000) and political (Butler 2009) worldviews that discriminate between the permissible insider and the prohibited outsider uses of spaces and allocation to places, as desirable (sacred) or undesirable (profane). This process can change at any time to reflect the dominant group's values.

7.2.1 Beach Precincts as a Sacred Cultural Construct

According to Tuan (1977) people physically order their world and assign suitable activities that relate to the upright human being who differentiates front from back, left from right and above from below. The allocation and arrangement of land uses to sacred, spatial uses and activities for different genders and groups of people was illustrated, articulated and extensively discussed by Tuan (1974, 1976, and 1977) and is shown in Figure 7.2.1a.



7.2.1a: Sacred Spaces (Adapted from Tuan 1977: 35)

During the research it became apparent that people probably consider the ocean in front of them as sacred and development behind them as profane. The transition of profane to sacred space is visible in the transect analyses, from the built environment through the access form. It is found in the movement and activities in the different transitional corridors, in the design,

orientation and location of buildings and the allocation of supportive infrastructure for different types of movement and activity. The research also indicated the desirable (sacred) user groups to be male and young, and the undesirable (profane) users to be female and old.

The following illustration (Figure 7.2.1b) summarises and simplifies the research into the Gold Coast beach precincts and the contemporary allocation of activities, movement and land uses to those inferior and superior, sacred and profane spaces based on Tuan's observations. To change these preferences of use and user, cultural-political change will need to occur in the worldviews of the dominant and project groups who make the decisions for the allocation and design of public and private spaces on the Gold Coast.

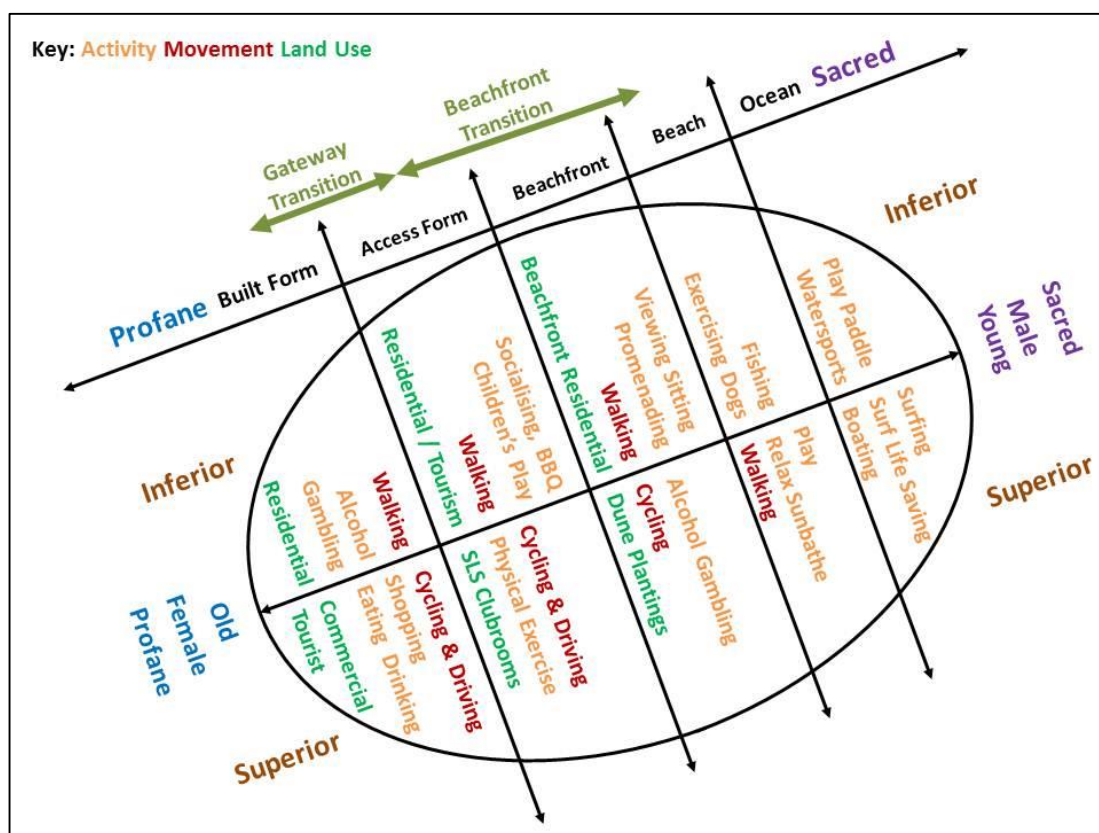


Figure 7.2.1b: Sacred Spaces for Activity, Movement and Development in Beach Precincts (Author, 2013)

The research demonstrated that the movement and activity preferences of particular demographic and user groups are favoured with more sacred locations in the beach precincts. The preferences of certain special interest groups, ages and genders for activities, movements and types of settlement groups also tends to unduly influence the provision of public infrastructure, space allocation and buildings to suit their needs (Section 7.1).

Beachfront property owners, for example, will challenge the legitimacy of any project, program or policy that limits the benefits of their direct connection to the foreshore and views. They will also seek to publically legitimise practices and policies that unduly benefit them, such as beach restoration and defensive coastal engineering projects, and present them as necessary for the maintenance of the public sections of beachfront (Section 6.1).

The cyclist, surf life saving and other special interest groups can similarly be seen as like-minded groups that assert that, as their activity is inherently good for society as a whole, their preferred use and design of public space is also good for everyone (Bicycle Network 2013). For instance, the preferred use of the foreshore as a smart transport route is elevated by cyclists above the claims of either the beachfront property owners or any other activity suited for this particular space, such as promenading. They have successfully advocated that the pathways along the foreshore be shared, straightened, widened and managed to facilitate their use of the beachfront transitional corridor (section 4.2).

There is a similar narrative found when examining the claim over the design and use of public space for Surf Life Saving Clubs and other physical activity groups. However, all these special interest groups, when articulating and encoding their version of the correct design, allocation of transitional corridors, locations, edges and public infrastructure tend to ignore or marginalise the intrinsic, sacred purpose of beach precincts to connect to nature from unique locations in order to relax and restore the body, mind and spirit.

7.2.2 Revised Typology of Form, Use and Transition of Beach Precincts

This section connects the concept of sacred spaces for activity, movement and settlement with the findings of the research, summarised in this chapter, to modify the typology of urban beach precincts described in sections 2.2/3 (see Figure 2.2 on p56). During the research, the purposive use of the beach precincts as a social, recreational and restorational place were identified as having different values and meanings for the different groups of people who live, visit and use the beach precinct (Sections 1.5 and 5.2/3/4) These values are in turn different to the values and meanings of those who design, plan, finance, manage and govern them (Sections 4.2/3/4/5 and 6.1/2/3/4).

From the residents who live in the beach suburbs and use them not only as their home but as active transport routes, exercise and recreational spaces, to the visitors and tourists, all of

whom have competing purposive uses, the beach precincts have been characterised by conflict over their design and use by age and gender (Section 5.2), role and identity (Section 3.0.1) and by membership of the constituencies of advantage and disadvantage (Section 5.5).

The research also identified that the spatial characteristics of beach precincts for public access to amenity and activity are found along the pathways through the transitional corridors, locations and edges of public, private and commercial built and natural forms (Section 6.1.1). The thesis also identified that different types of activity are related to the arrangement and provision of facilities in the transitional spaces of the beach precinct (Section 7.1).

The most important of these transitional spaces is found along the beachfront corridor. It is in this corridor that the values of the beach precinct peak, as does the political conflict over its control (Section 7.1.1). All the other values of the beach precinct are decided in this corridor and then modified or supported in the other beach precinct transitional corridors, locations and edges. The revised urban typology of beach precincts shows the relationship of value, form and use in the transitional corridors, locations and edges of the public realm of beach precincts, as revealed in this thesis (Figure 7.2.2).

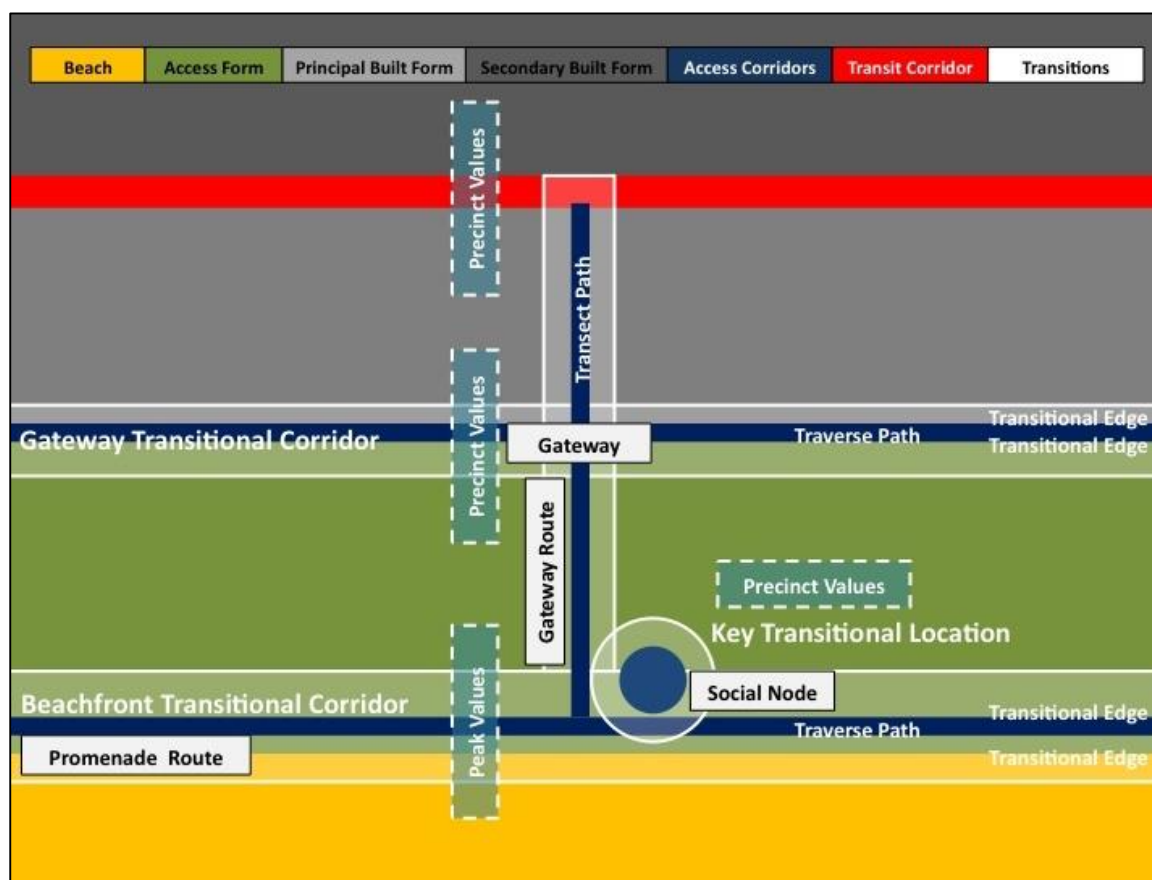


Figure 7.2.2: Revised Typology of Form, Use and Transition of Beach Precincts (Author 2014)

The revised typology acknowledges the land use and activity functions of the initial typology (Section 2.2) and identifies the transitions for the connection of land use and activity. The importance of the foreshore park type of access form is illustrated most clearly in the Broadbeach and Burleigh Heads beach precincts and in the way they meet the conflicting needs of residents, tourists and visitors (Section 5.4).

The transitions also help to define the boundaries of peak public conflict over purposive use of beach precincts (Sections 1.4, 1.5.2 and 6.1) and the corridors, locations and edges that professionals need to consider in the urban design and planning of the public realm of beach precincts to meet the needs of the different groups who use them. These are the:

- **Beachfront Transitional Corridor** found along the transverse path between the access form and the beach in places with public foreshore spaces;
- **Gateway Transitional Corridor** found along the transect path between the built and access form;
- **Transitional Locations** found at social nodes, beach access points and gateways where facilities provide access to specific activities and amenities, and
- **Transitional Edges** - the interfaces between public and private/commercial property and the different forms of the typology.

The beachfront transitional corridor is where the peak values of all beach precincts are located. The other transitional corridors, locations and edges reflect the decisions made by the dominant and project groups for the local morphological, political and cultural context, and demonstrate the particular beach precinct values as a design solution that has resolved the sacred and profane uses and users in line with contemporary and historical local preferences.

This leads us into the next section where a preferred design solution for a beach precinct, responsive to preferred uses and activities for social, recreational and restorative purposes, is oriented to egalitarian allocation of the sacred and profane spaces that do not exclude the passive group of the constituency of disadvantage.

7.2.3 The Preferred Spatial Relationships of a Responsive Beach Precinct

The anticipated contribution of this research was to inform the urban design and planning of beach precincts so that they responded to the distinctive needs for use and activity to produce

places that connect the built and natural environments, without compromising their social, recreational and restorational values of a special case of development (Section 1.7.2).

It was also intended that the research contributed to the urban design and planning of current and future beach precincts (Section 1.7.3) and the debate into their sustainable development (Section 1.7.4). This section presents the preferred relationships of beach precincts that respond to the intrinsic values of beach precincts.

The research conducted in this thesis suggests that the nature of the responsive relationship of people, place and function at the transitional locations, corridors and edges interacts with the physical attributes of that transition. The most important of these transitions is the beachfront transitional corridor. It is here that the decisions to allow or restrict public access to views and environments that enable or disable the public or private benefits of the restorative environment, affect the public or private experience of the entire beach precinct.

The simplified schematic describes the human dimensions of the spatial relationships of a foreshore-park oriented to support the most diversity of choice and opportunity for the widest range of visitors (Figure 7.2.3a). It is drawn from the perspective of a walking visitor accessing the restorational benefits of the natural environments of park, beach and ocean (Kaplan 2008). It also supports the physiological and psychological needs for extended stays in the beach precinct (Maslow 1943).

The precinct is oriented to the human dimensions associated with the limits of distance that people can communicate verbally and discern facial expressions (social distance 25m) and recognise exaggerated gestures and dominant emotions (theatrical distance 35m) (Gehl 2010). The foreshore park would be a walking/jogging-only environment with exceptions for mobility aides, council and emergency vehicles. Local access, cycling and public transport would be catered for in a low speed, shared access, Woonerf space.

The schema also recognises the best use of the different transitional corridors of beach precincts revealed in the research to date. These are the traverse path, as a promenading route, and the transect path, as the gateway route from the built to natural environment. The schematic also indicates the best use of the access, built and natural form spaces for the location for facilities to support various activities. It also shows the preferred location of suitable commercial and residential land uses to support surveillance and extended stays.

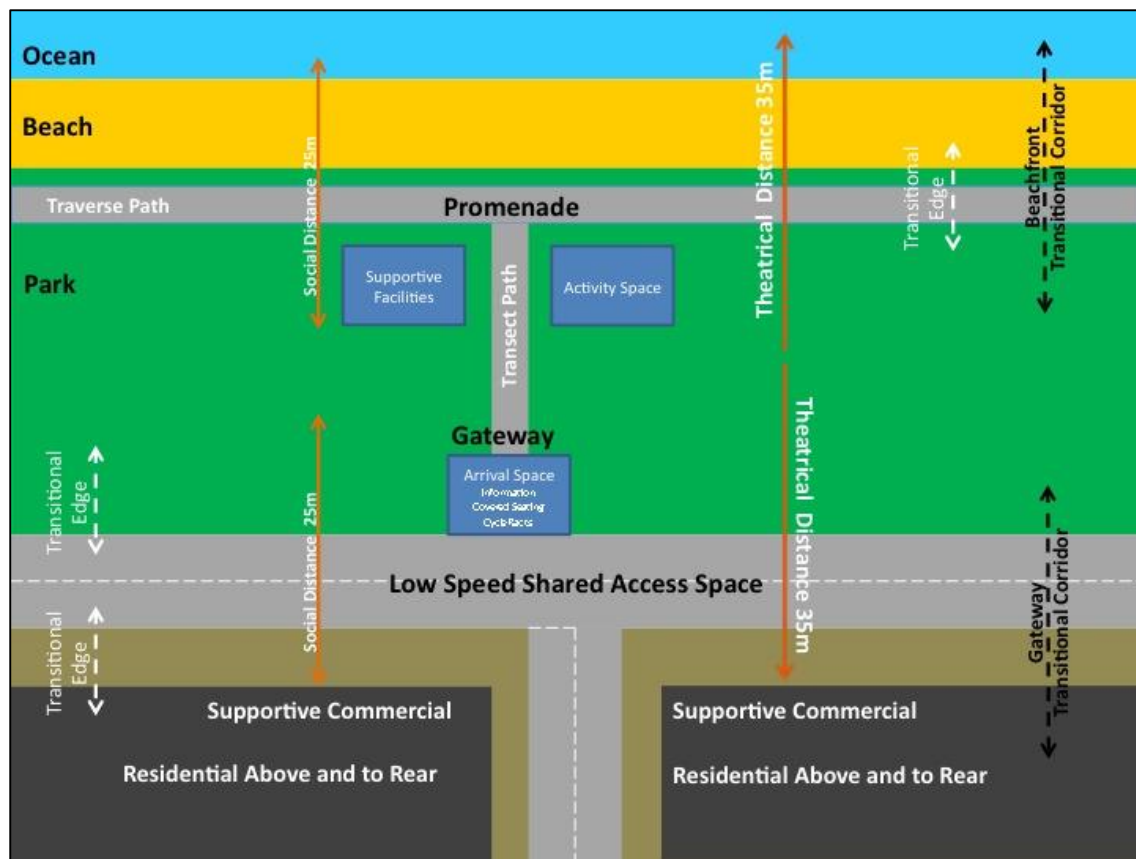


Figure 7.2.3a: Relationships of Routes, Distance, Forms and Facility in the Beach Precinct (Author 2013)

The schematic spatial arrangement of routes, forms and facilities shown in Figure 7.2.3b illustrates the proposed maximum perceptive distances between the facilities and amenities to support intended activities. This schema is centred on the transitional location of a beach access at the junction of the promenade and gateway routes. The layout is based on the distribution of facilities found at the location of the children's playground along the beach in Burleigh Heads, but other major and support facilities could be substituted to support different beach precinct appropriate activities.

In this spatial arrangement, the transition from the promenading path to the beach is open. The cluster of facilities is arranged at the intersection of the two routes. They are within social and theatrical distances to support a variety of activities, in proximity to the restorative and recreational influence of the different environments, with uninterrupted views to the beach and ocean. The different forms need to be within social and theatrical distances to support diversity in social interaction and use. Any commercial transitional edge needs to be within spectator distance (70m) of the promenading path to support legibility for visitors.

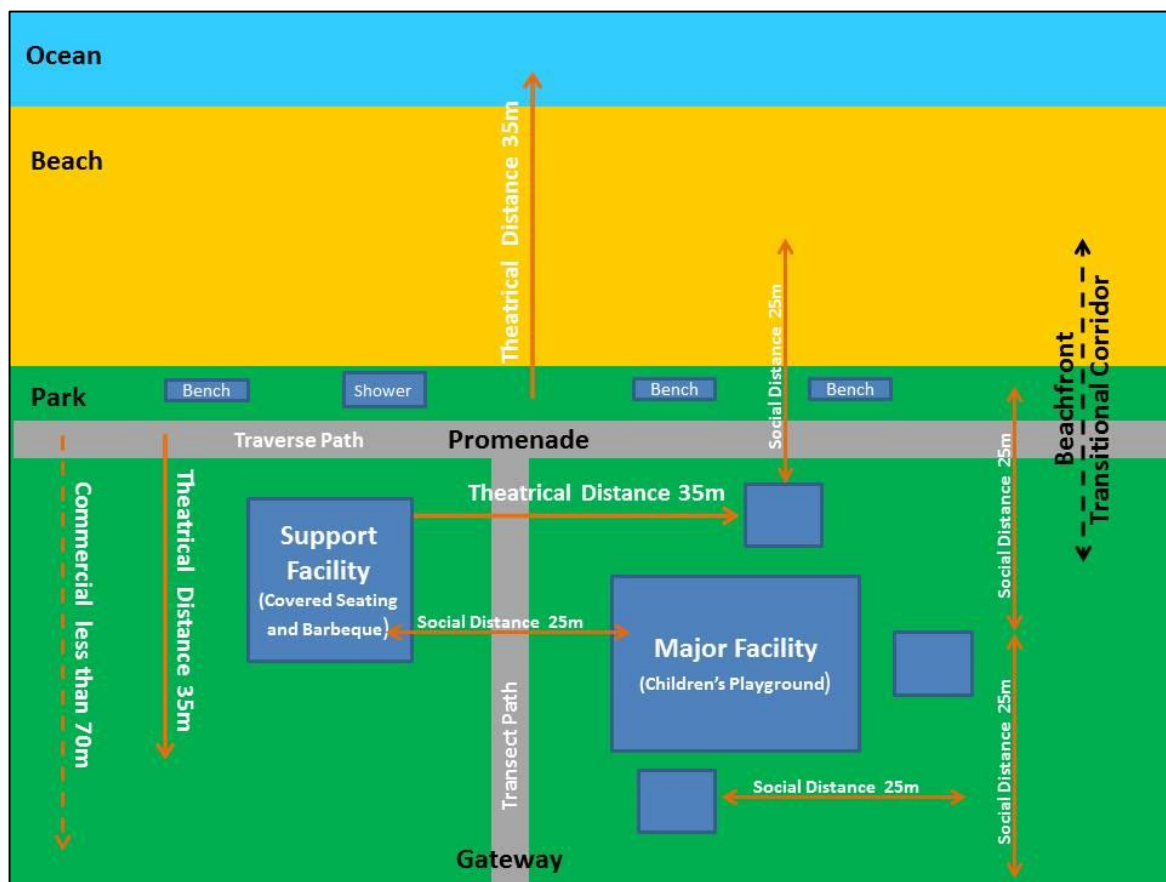


Figure 7.2.3b: Relationships of Facility, Distances, and Facility along the Promenade Route (Author 2013)

The widths of the corridors may be affected by many different local factors, such as dune size and profile. It is hypothesised that the width of the transition from one form to another is best when it is completed within the perceptual theatrical distance of 35m, as found in Burleigh Heads. This pattern of co-location and proximity of routes, spaces, facilities and amenities supports the widest diversity of activity possible, as compared to locations like Broadbeach where this transition is completed beyond 35m.

The nature of the design of the transitions will determine who is welcome and who is not welcome to share in the benefits of the public realm of the foreshore-park, beach and ocean. Great care must therefore be taken with the design, location and selection of the type of facilities to support and enable appropriate activities. Probably the most significant urban design decisions in beach precincts are to be found along the traverse promenading route in the beachfront transitional corridor and in the nature of the public access between the foreshore park and the beach, from that route.

We now turn to the design of an evidence-based approach for the urban design and planning of beach precincts that is responsive to the social, recreational and restorative values of a precinct which supports egalitarian use and activity.

7.2.4 Proposed Model for Urban Design Guidelines for Beach Precincts

One of the initial intents of the research was to contribute to the formulation of urban design and planning guidelines or suggestions for the design, planning, building and governance of beach precincts (Sections 1.7.2/3/4). The research has indicated that designing for the beach precincts using design guidelines developed for different places in different contexts, such as general urban or city centres, was an inappropriate application of design guidelines (Section 3.3). The research also identified characteristics of the urban design and planning of beach precincts that would be appropriate, responsible and responsive.

According to Gil *et al.* (2012), typology-driven research into the urban form of places by applying typologies of place to urban design analyses has not been widely adopted as a research practice, despite its importance in understanding responsive and responsible urban environments (Samuels 2008). Some of the reasons given for this are the dominance of established architectural, urban design and planning practices based on land-use planning (Hall 2008) and the typological analytical process being subjective and laborious and confined to restrictive and specific geographical regions (Gil *et al.* 2012).

The converse of these arguments against a typology-driven urban design methodology, is that the production of architectural, urban design and planning practices, based on generalised urban design guidelines (Carmona, Marshall and Stevens 2006), can produce urban development that is unresponsive and irresponsible to the local urban morphology and the values associated with particular places like waterfronts (Chang and Huang 2008).

The affective response to place described by Rapoport (1982) and the place-associated economic, social and environmental values that urban design theorists like Carmona (2003) have described are difficult to quantify. However, they are relatively easy to qualify if we use the approach of humanist geographers like Tuan (1977) towards concepts of space and place, or the identification of places within the cultural landscape, used by Relph (1976).

Using cultural landscape theories we come to understand the design and planning of places and spaces as political artifacts in a cultural landscape, as suggested by Cuthbert (2007). This

leads us to suggest urban design guidelines that are expressly political in their foundation and based on the intrinsic values of a place for the design of the public realm.

The term egalitarian is adopted in this thesis to represent the political position that all people are, in principle, equal and should enjoy equal rights and opportunities. This term is chosen rather than ‘democratic’, which relates to supporting democracy and its principles, and includes egalitarian access (Oxford Dictionaries 2013). This is an important distinction as it can be used to discuss the appropriateness of decisions made in the political processes of governance for egalitarian public access to activity, amenity and facility.

As Iverson (2010) suggests, a political principle can be set aside or modified if access for one group or activity that is achievable in many places, compromises the preferred activities or prevents access by others to a benefit that cannot be obtained elsewhere. This is the case in beach precincts where people come to relax, restore and engage in social activity.

The Delphi group inquiry recommended that design solutions should never be applied to this special case of human settlement without full recognition of the local context of the natural environment, its functions, cultural and historic significance, climate and degree of vulnerability to extreme weather events, inundation, flooding and erosion (Stojanovic and Barker 2008).

They also considered that urban design solutions for beach precincts must allow people the opportunity to relax, restore and connect to nature (Wilson 1984) and place (Tuan 1974), including its history, flora, fauna, landscapes, views and other sensory attractions. The urban design of beach precincts should also be sympathetic to the unique location, cultural role and transitional nature found in the adjacency of the built and natural environments in an unstable and vulnerable space (section 6.3.3).

The Delphi group also thought that the urban design and planning of beach precincts should enable egalitarian, walkable, public access to activity, amenity and facility of the public spaces and places of the precinct. Wherever possible, schemes and projects or proposals should enhance the degree of public access.

The proposed model for the formulation of urban design guidelines for beach precincts was constructed by the author and incorporates the findings of this thesis. It is intended for urban beach precincts that are similar to those found on the Gold Coast (Figure 7.2.4). The

proposed urban design guidelines are deliberately presented as a finely balanced construct of principles, attributes and values.

The structure of the model rests on a base of the beach precinct urban design principles of inviting, comfortable and secure and their associated attributes (Section 4.4) which support the peak urban design principles and attributes. Resting on top of the peak and beach precinct urban design principles and attributes is a simple political mission statement applicable to any beach precinct.

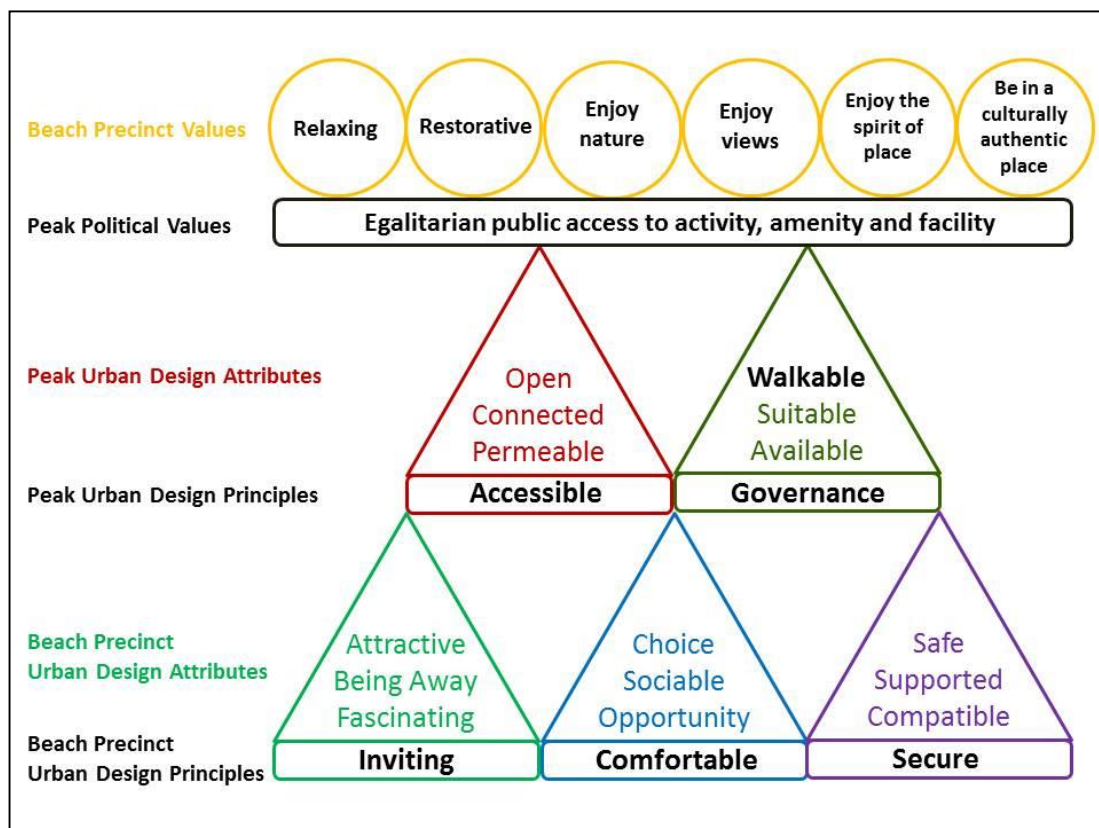


Figure 7.2.4: Proposed Model for Urban Design Guidelines for Beach Precincts (Author 2014)

These peak principles define the ‘governance of a walkable and accessible public realm’ and their attributes are described in sections 3.3.1/2/3. These principles should be included in any iteration of this model if it is to be modified for other types of place. Resting on top of the peak and beach precinct urban design principles and attributes is a simple political mission statement applicable to any beach precinct.

This mission statement can be modified to suit local political and cultural values. Balanced along this political platform are the values most associated in the research with beach

precincts: the ability of people to relax, restore and connect to nature by the amenity of views that is consistent with the spirit of place and an authentic cultural context. These values of place are thought to be essential to any iteration of local beach precinct design, but they may be changed to suit the particular values of other places.

The proposed urban design guidelines have limited application for beach precincts without a public foreshore park or significant public foreshore spaces. Achieving egalitarian access to activity, amenity and facility in a walkable accessible public realm is considered by the researcher to be difficult, if not impossible, in such a precinct. We now move on to consider proposed processes for values-based urban design and planning in which the proposed model for urban design guidelines would operate.

The beach precinct and peak political values could be varied to accommodate established uses such as surfing, or economic objectives such as a precinct with existing international tourism or commercial destinations. Some values could also be varied if social objectives could be met by a development proposal or historical or indigenous values of place are protected or enhanced.

In some circumstances the local authority may have a large number of beach precincts within its jurisdiction and be aiming to meet diverse needs. For instance, a precinct may be devoted to hosting local and regional events as it has existing accommodation and good transport connections, or there may be a precinct with a distinctive, local, alternative culture.

However, caution needs to be exercised to ensure that all members of the constituency of disadvantage are conveniently catered for and they are not marginalised or restricted to ghetto beach precincts. All precincts need to integrate the needs of the constituency into the design of the public and private spaces of the precinct to maintain the peak political value of egalitarian public access to activity, amenity and facility.

7.2.5 Values Based Processes of Urban Design and Planning in Beach Precincts

This section is concerned with the way that the findings of the research could be incorporated into the urban design and planning of beach precincts to allow the proposed model for urban design guidelines to be used. This section will outline the planning methods, processes and procedures thought to be necessary for this to be achieved. This includes a proposal for a coastal commission with oversight for urban design and planning procedures and processes.

Coastal Commission

The Delphi group, as a whole, supported the idea that there needs to be a fundamental shift away from the application of urban design and planning practices developed for inland cities, towards a new paradigm that reorients the planning and governance of beach precincts for the benefit of all. The group suggested a commonwealth regulated and controlled coastal commission along the entire length of the nation's coast as the best way to tackle the ongoing challenges faced by coastal cities, towns and settlements in Australia (Sections 6.3/4).

The oversight and responsibility for an appropriate design and planning process is currently under the authority of local and state government in Queensland (Queensland State Government 2010). Enabling the design and development of beach precincts to be aligned to the values, principles and attributes identified in this research would require changes to local and state planning schemes. A national coastal commission would also require changes to the commonwealth constitution, making a state coastal commission, similar to the Californian Coastal Commission, a more likely option (Californian Coastal Commission 2012).

Whether state or national, a coastal commission would allow the development of a value - based planning process for the urban design and planning of beach precincts. It could also minimise the effects of development on the environment and reduce the liability of the nation for severe weather events, expected sea level rise and associated erosion and flooding of public and private infrastructure and buildings located in inappropriate locations (Committee on Coastal Erosion Zone Management 1990).

This approach would rely on the formation of coastal commission research and design teams. The teams would use the model for urban design guidelines (section 7.2.4) to determine the values, attributes and principles appropriate to individual precincts. This would allow the production of urban design guidelines and planning schema that explicitly took into account the needs of the constituency of disadvantage (Haas and Olsson 2014). These teams would be available to small and large coastal communities in each state. The roles and professional composition of a suitable multi-disciplinary team for this task is initially thought to be:

- **Determination of the Beach Precinct and Peak Political Values:** This concern is seen as the field of expertise of the political functionaries, land use planners, developers, and financiers of the project. Professional assistance is obtained from the local business community and any gatekeeper organisations active in the beach

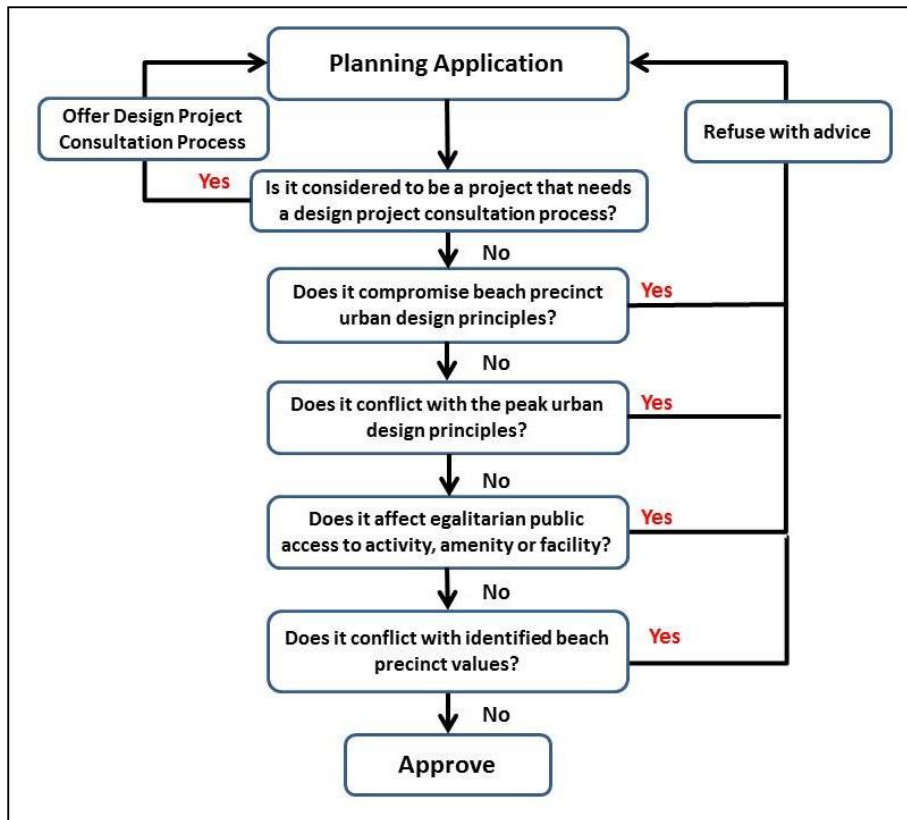
precinct. This network is necessary to create and support the appropriate variety of opportunity and choice for the beach precinct to be viable. The coastal commission urban design and planning team would also be responsible for ensuring that local interests do not subvert the process for economic gain (Salvesen 2005).

- **Survey and Assess the Beach Precinct and Peak Urban Design Principles:** This concern is seen as within the fields of expertise of the urban designer, landscape architect and planner for the public spaces and places of the beach precinct, in particular the transitional corridors, locations and edges. The architect and urban designer are required for the design of appropriate edge transitions from private/commercial spaces to public spaces, and the transport planner for the route connections within the precinct and to its adjacent settlements and beyond.
- **Represent the Constituency of Disadvantage:** An important consideration in any design process for beach precincts is that the constituency of disadvantage be able to benefit from the identified beach precinct values and the activation of the urban design principles of inviting, comfortable and secure. It is thought that this would be the role of the community planner in collaboration with the urban designer/planner. Substantial input should also be sought from urban and environmental behavioural scientists, the local community, especially the local arts, activity and environmental groups, and other special interest groups as appropriate to place, such as local indigenous communities.

Suggested development approval process

In order to ensure that the urban design guidelines and schemes produced by the research and design teams for different beach precincts achieve their objectives; suitable controls on development approval are needed. Figure 7.2.5a shows the process for development approval and its relationship with a design project consultation process explained later in this section.

If the application was a substantial project that would materially alter the nature or use of place, or impact the precinct by changing use or the nature of place in the transitional corridors, locations and edges of the beach precinct, the applicant would be offered a design project consultation process. If the application compromised, conflicted or affected egalitarian access or the principles or values of the guidelines or schemes the application would be refused.



7.2.5a: Proposed Development Approval Process for Beach Precincts (Author 2014)

If a project is refused, explanations should be given that clearly articulate the reason for refusal and advice offered on how the application may be altered to gain possible approval. Unlike the current permissive planning approval process in Queensland (England 2004), a development application that is clearly unsuitable could be rejected, either without recourse or with advice, if it does not meet the values and principles identified for that beach precinct.

We will now consider the intent and structure of an urban design project consultation process that is oriented to produce suggestions that improve or modify the design of development proposals appropriate to the development of a responsible and responsive beach precinct.

Beach Precinct Urban Design Project Consultation Process

The proposed urban design project consultation process is informed by an egalitarian use, activity and place analysis. It is oriented to produce suggestions that improve or modify the design of development proposals appropriate to the development of a responsible and responsive beach precinct. The urban design consultation process would have four stages: a research stage; a design stage; a consultation stage and a public stage (Figure 7.2.5b). This is intended to improve the quality of development proposals through a process of collaborative research and education of all parties involved.

In keeping with the intent of the urban design model for beach precincts, the research stage would respond to the development proposal by identifying the barriers to egalitarian public access produced by the proposal. It would also identify any uses, activities and needs that could be met by elements of the proposal and generate initial design project plans that could enhance the contribution of the proposal for egalitarian use and activity in the beach precinct.

The research stage would be followed by a collaborative principles and values compliance analysis. This would identify the positive, neutral and negative elements of any initial design project plans and the way they impact or enhance the urban design model for the particular beach precinct, so that the process of compliance to the urban design guidelines and schema for that precinct is clear to all parties.

The consultation stage would see any design project plans for the proposed development being sent to the coastal commission for analysis against higher order requirements of coastal planning developed by the commission. The coastal commission could reject, provide advice or suggest modifications to the design of the proposal at this stage. If plans were accepted by the coastal commission they could then be forwarded to the local authority and public for comment.

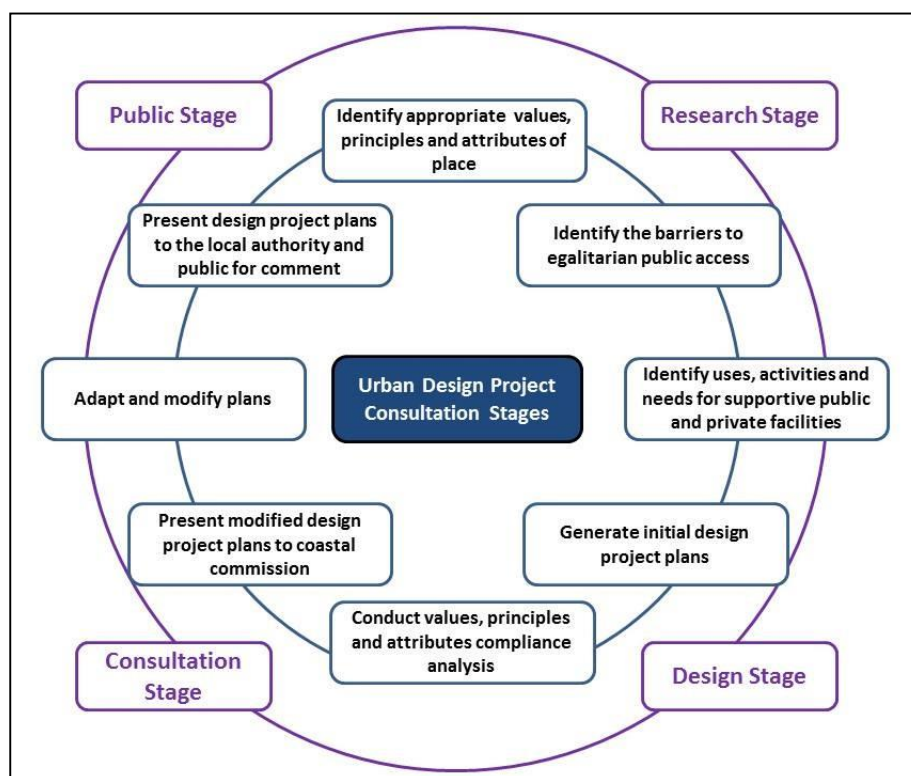


Figure 7.2.5b: The Urban Design Project Consultation Process Stages (Author 2014)

Public comment would be for the purpose of reviewing the preferences for use and activity that had not been revealed during the previous stages, so that they can be incorporated in the design of the development and not necessarily as a form of veto. Any modified proposal would still need to meet the intention of the beach precinct planning scheme. It could be rejected by the coastal commission after the consultation process with clear reasons given for the refusal.

This does not mean that applications need to meet a pattern book approach to urban design. It is intended that development should be allowed to evolve to meet changing cultural and social needs and desires. The process should also allow for cultural innovation that does not compromise the principles of egalitarian public access, conflict with the articulated values of place or compromise desirable existing urban design attributes.

We now move to the final section of the thesis, where a research model that supports the urban design processes suggested in this section will be described. It can be used in the development of urban design guidelines and planning schemes, as well as the beach precinct development approval and project consultation processes.

7.3 Proposing a Research Model to Examine the Urban Design of Beach Precincts

This section concludes the thesis with a proposal for a research model which can meet the requirements for the proposed models of urban design and planning in the previous sections (sections 7.1.4 and .5). The research model is also intended to guide the inquiry into the preferences for beach precinct design and development of the identified constituencies of advantage and disadvantage not specifically addressed due the research design of the thesis (Section 7.1). Finally the research model is intended to be used to address the areas of future research.

The research in this thesis suggests that if the community consultation models for public participation in urban design and planning are working at all, they favour the opinions of the members of the constituency of advantage who are active as members of the dominant, project and resistant groups in society (Low and Smith 2006).

The constituency of disadvantage are usually inactive members of the passive or resistant groups in regard to issues concerning built environment, and are virtually voiceless in the decision making processes (Dicker and Sugarman 2005). This thesis strongly suggests that the opinions and needs of the constituency of disadvantage need to be incorporated into

future research if egalitarian outcomes are to be achieved for the urban design and planning of the public realm of beach precincts (Gunder 2011).

In designing any future research it is considered important to ensure the participation of the constituency of disadvantage in decision making processes. It is suggested that the role of urban designers and planners should be to represent the constituency of disadvantage through a process of targeted research (Gunder 2003). The urban design principle of governance cannot function effectively without knowledge of the opinions and needs of the constituency of disadvantage. It is through knowing the needs and preferences of the passive groups in the constituency of disadvantage that government representatives and officials, in cooperation with built environment and urban professionals can operationalise the highest and best use of the public realm (Lunney and Mathews 2002; Crase, Dollery and Wallis 2005).

In order to represent the constituency of disadvantage, their needs and preferences should be examined in a way that is aligned to how people use beach precincts. It is necessary to design a research model that can guide the inquiry into the external and internal factors that modify an individual's desires, needs, expectations and preferences for the use of place.

The succeeding sub-sections will describe a model to guide research into the conflicted needs, expectations and preferences that represent the disadvantaged and passive in the decision-making process.

7.3.1 The Degree of Fit between the Use, Design and Planning of Beach Precincts

A model for the degree of fit between the seen and unseen factors and the observed behaviours and reported preferences of the use of a place has been developed by the author as an outcome of the thesis. It aims to construct a qualitative framework of how well places meet different people's expectations and preferences for activity and use by the degree of fit with individual desires, needs, expectations and preferences to use of place.

Lynch (1981) also addressed the connections between human values and perceptions and the spatial arrangement, physical form and allocation of spaces and places to enable modify or adapt to desirable uses and behaviours. In constructing the theory of 'good city form,' Lynch uses 'fit' as one of his criteria in a set of performance dimensions which relate the human values of different types of place in cities to their spatial characteristics, along with 'access, control, sense vitality, efficiency and justice'.

The following degree of fit was developed from the researcher's understanding of the term 'fit' from an engineering perspective. The expectations and preferences of the user are proposed to have four conditions of fit: 'no fit', 'dysfunctional fit', a 'degree of fit' and 'full fit'. If the user of the beach precinct expects to engage in an activity and has a preference for how that will occur, their perception of the precinct before and after the visit will depend on the degree of fit of those expectations and preferences to their experiences (Figure 7.3.1).

The first condition is of 'no fit'. The visitor finds no match for their expectations and preferences in the precinct. For instance, a visitor may expect to have a pleasant walk along the beach followed by a reasonably priced coffee in a pleasant café. They may also prefer to drive their car and park at a convenient place to start and finish their walk. If these expectations and preferences are not met in the precinct visitors are not likely to return to that precinct.

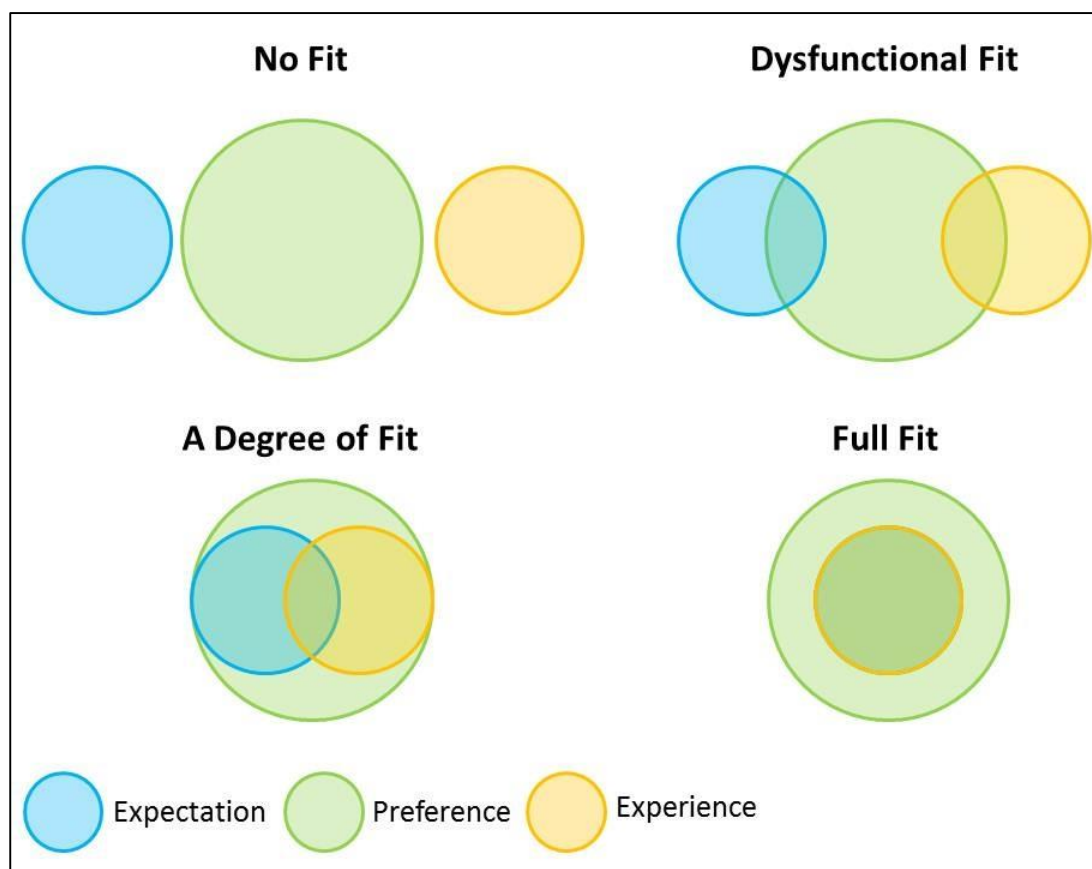


Figure 7.3.1: Model for the Degree of Fit of Expectation and Preference to Experience (Author 2010)

The degree of fit is a contextual individual assessment of the attributes of a particular place. For instance, in the example given, it may suit a resident of the precinct that the lack of fit for visitors to the precinct discourages them from visiting. The lack of parking and the absence

of a café increases the degree of fit for the resident, as they don't need to park and can use their home for refreshment, with the added advantage that they have an uncrowded beach. Therefore the same attributes and characteristics of place can have differing degrees of fit for different individuals.

The second condition of fit is a dysfunctional fit. The user of the precinct may have an unpleasant walk along a poor footpath with no view of the sea and visit a cafe that is ten minutes walking distance inland, only accessible by crossing a busy road. It may also have restricted-period parking they consider expensive and inconvenient. In this case, they may choose not to visit, or to tolerate the degree of inconvenience or perhaps modify their expectations.

The third condition of fit of the precinct is when the urban design attributes of the precinct have a 'degree of fit' for their expectations and preferences, but where the perception of the precinct is, to a degree, compromised. The degree of fit is expected to vary for different users, but the degree of fit will apply to all users with the same expectations. Users who experience this condition may return, adapt their expectations and preferences or seek a closer fit at an alternative precinct which better meets their psychological and physiological needs.

The last and most preferred condition of fit is when the user experiences a 'full fit' of their expectations and preferences. This last condition rewards the user with the satisfaction of their expectations and preferences, creating a perception that their preferred attributes of place have been met. They are then more likely to enjoy visiting or living in this place.

The next component of the proposed research model arises from the need to incorporate an inquiry into the external (seen) and internal (unseen) factors that modify the individual's desires, needs, expectations and preferences when they are using a public place, and how social, environmental and design factors modify their behaviours. In the course of the research, motivation was identified as a psychological process central to directing behaviours towards obtaining satisfaction of expectation and preferences in the use of place.

7.3.2 Proposed Research Model for the Urban Design of Beach Precincts

The research findings led to a search for a suitable urban design model which could explain how places are used and how they meet the expectations of different types of individuals and groups with similar needs and expectations. A research model that could meet these objectives could help urban designers, planners, architects and developers to design

environments that are responsive to the functional needs of those different individuals and groups and begin to explain the associations and relationships between the design of a place and its uses.

A research model developed by Hofmann *et al.* (2102) was adopted as the foundation of the proposed research model, as it helps to explain the social rules of living with others, in particular, different groups sharing the use of public spaces (Figure 7.3.2a). The conceptual construct of motivated behaviour includes an examination of the role of the personality trait of self-control in restraining or redirecting desires, especially where social rules and formal regulations constrain and conflict the satisfaction of preferences in a public place.

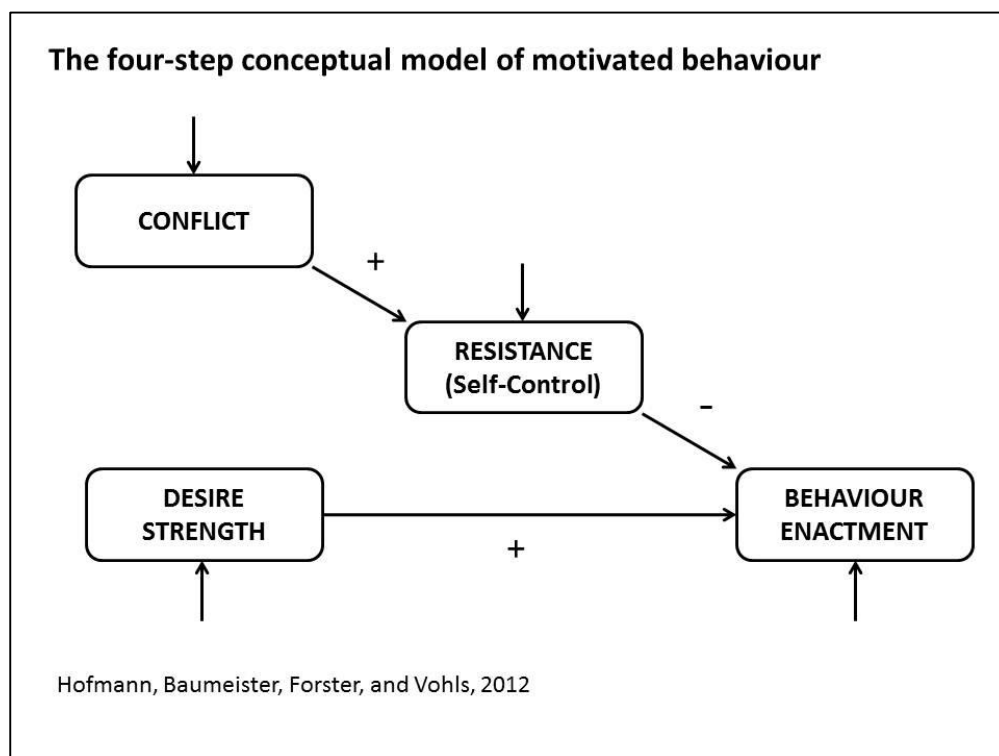


Figure 7.3.2a: The four-step conceptual model of motivated behaviour (Hofmann *et al.* 2012)

The lower pathway of the model assumes that desire strength instigates behaviour. The upper pathway represents the inhibiting effect of self-control, triggered by the experience of conflict between a desire and other goals. The external arrows indicate how each step may be moderated by personality and situational factors. People identified as perfectionists found it harder to control conflict with their goals, values and motivations, with reported high levels of conflict and frequent resistance to desires (Baumeister and Heatherington 1996).

People with a behavioural trait such as narcissistic self-entitlement were more likely to enact desires and feel less conflicted in their behaviour enactment (de Ridder *et al.* 2011). If this

model is applied to an analysis of conflicted access to desired environments, places or facilities in the beach precinct, it can be seen that relying on social rules and formal regulation to modify or moderate behaviours is unlikely to succeed if the desire strength is very high and self-control is not absolute.

Hofman *et al.*'s (2012) model also explains why young males will cross the highway even if barriers are erected in the central reservation; why property owners will cut down trees growing in the public land of the dunes that diminish their views; or why cyclists will speed through social spaces in the foreshore parks to enjoy the sensation of speed (Grzebieta, McIntosh and Chong 2011). It also explains the sense of entitlement to private enjoyment of public goods, such as views and public spaces, exhibited during the course of this research.

The research by Hofmann *et al.* (2012) also indicates that a possible solution to conflict over spaces and places in the beach precinct lies in an incorporation of people's needs, desires, and behaviours into the governance process. In order to prioritise the spatial design and arrangement of the natural and built environments of beach precincts, a clear understanding of people's psychological and physiological needs is required. The provision of public and private infrastructure that is supportive of those needs is therefore likely to assist in reducing conflict and improving the sustainable governance and design of the precincts.

It was not within the scope of the research to investigate the effect of personality on purposive use of place, although it is arguable that incorporating personality traits, situational and social environments in the analysis of the use of places would be very useful to urban designers and planners. The influence of personality ought to be considered when analysing the findings of the research, particularly its effect on the decision making of individuals and groups (Kivetz and Zheng 2006).

The research model, proposed to examine the conflicts created by the urban design of beach precincts (figure 7.3.2b), incorporates both the conceptual model of motivated behaviour designed by Hoffman *et al.* (2012) and the concept of the degree of fit (Author 2010). This model could be used to guide and design future research into the purposive use of place that includes a process for understanding the mechanisms which act on individual and group expectations and preferences, and the influences that external and internal factors have on the activation of desired behaviours.

The proposed research model could also be used to examine how the environmental opportunity and experience of behaviour affected the degree of satisfaction with that place for those behaviours. The role of external factors in creating conflict with behavioural satisfaction could also be explored and tied in with different types and groups of peoples' preferences, behaviours and degree of satisfaction of particular places.

Research conducted using this model is intended to inform and support decision making for an egalitarian, responsible (Haas and Olsson 2014) and responsive (Bentley *et al.* 1985) approach to urban design that reduces the barriers to accessibility of the beach precincts for the constituency of disadvantage identified in the thesis. This means that the public realm of beach precincts would be responsive to the functional needs of this constituency (Fainstein 2000).

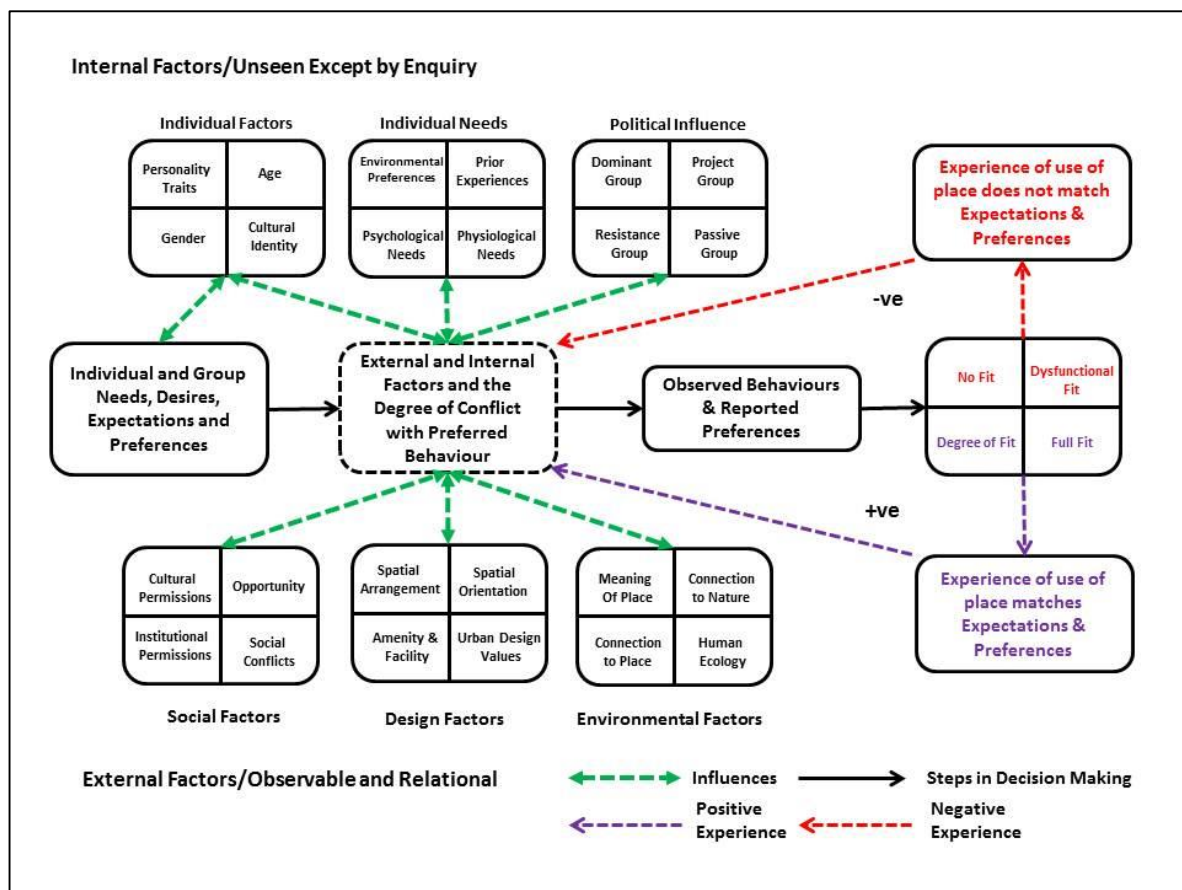


Figure 7.3.2b: Research Model for Examining Conflict in the Urban Design of Beach Precincts (Author 2013)

It is not thought that current approaches of urban design and planning are capable of meeting these needs, as they are not focused upon them (Stojanovic and Barker 2008). Urban design is usually focused on neighbourhood design, building codes, street patterns and arrangement

of urban activities commonly found in the urban form of towns and cities (Centre for Applied Transect Studies 2010; Llewellyn Davies 2007).

Without the adoption of a new, research-based approach to the urban design and planning of beach precincts, it is likely that the contemporary urban design and planning regimes will continue to have unintended and negative consequences for the constituency of disadvantage. We now move on to the last section of the thesis, in which the proposed research model could be utilised in guiding future research into how well the urban design attributes, characteristics and values of beach precincts meet the expectations, preferences and values of this constituency (Section 1.7).

7.3.3 Areas for Future Research

This thesis has identified a number of research propositions, issues and topics that would be worthy of future research using the research model developed in this thesis. There are also unanswered aspects of the original research questions that the proposed model for research into the urban design of beach precincts could be used to examine.

The research also revealed interesting topics embedded throughout the rich data collected by the researcher that would reward further research effort. The propositions, issues and topics which most pressingly present themselves, when we consider the appropriate urban design and planning of beach precincts, are listed as follows:

- Further research into the typological elements of beach precincts in places which are similar to and different from the Gold Coast in culture, climate and context to refine and extend the typology of urban beach precincts to wider application.
- An inquiry into the common natural features of the environment of beach precincts such as headlands, and the relational patterns of those features with the typological elements of urban beach precincts to identify preferences of place for use and activity exist, based on these relational patterns.
- Exploratory research into the way human sensory perceptions affect the way people feel invited, comfortable and secure in beach precincts and how public and private infrastructure can help them to achieve their use and activity preferences.
- The model of open community consultation is too often dominated by interested parties and lobby groups who have vested interests in the design outcomes (Gunder 2003). The development of research strategies to identify the preferences and needs of

women, the young and old for beach precinct use and activity is considered to be an important objective of future research in making the beach precinct attractive to the constituency of disadvantage.

- Research is needed to further identify and understand how beach precincts can meet common, shared and unique needs and preferences of people who are members of the constituency of disadvantage in particular older women.
- Research into the role of Surf Life Saving Clubs has been frustrated by a lack of interest by the clubs in taking part in this research. However, if co-operation with the members, clubs and associations could be achieved, it would help to create an understanding of their role in provision of public facilities and amenities. It could also explain the clubs' position in the planning decisions made that affect them.
- Research is also needed into the nature and causes of the conflict between different types of physical activity such as walking, jogging, cycling, surfing, jet-ski riding, kite-surfing, body-boarding, boating and sailing and fishing and how the spatial and facility needs of these activities can be met in beach precincts.
- There is a need to research the motivations and opinions of decision makers for urban design and planning practices. This is because activities that are appropriate to women's interests and the provision of facilities that specifically support the needs of women do not appear to be well understood by the design and planning profession.
- Research into personality traits and the psychological mechanisms of environmental behaviour in the use of beach precincts would appear to be a useful research field. This would include an inquiry into how people's individual preferences are formed by their personality traits, gender and age. In particular, how the urban design of beach precincts can address the specific needs of an ageing population (Section 7.3.2).
- The use of the proposed research model would allow an in depth inquiry into the purposive use of place by older women that examined issues of mobility and ageing. This research should compare the preferences of place for specific behaviours by older women with other groups of beach precinct users to identify their critical motivations for beach visitation and potential areas of conflict with other users.
- The nature of social visitation and the relationships and associations of group composition to enable and support beach precinct use and activity was indicated as an area of future research, in particular, meeting the social needs of child carer groups for their preferences and expectations of visitation.

- Research would be useful to establish the nature and range of relational patterns between use and activity with characteristics of the different types of transitional corridors, locations, forms and edges of beach precincts. For example, how do different types of parking provision in the gateway transitional corridor affect use and activity?
- The suggested urban design model (Section 7.2.4) needs to be used to design walk-through urban design analyses in different beach precincts to refine and further test its underlying premises. Urban design guidelines that arise from the urban design model for existing and proposed beach precincts should be field tested and peer reviewed to improve their articulation and translation into planning schemes, policies, programs and projects.
- In the course of the research, relational patterns were suggested between movement activity and other types of activity and the different locations in the beach precinct. Although too few beach precincts were examined for this relationship to be proven, it does appear to be a feasible proposition that locations can be categorised into different types by the ratio of movement activity to other types of activity. It is unclear if the patterns only apply to precincts with a public realm foreshore park, or if different patterns exist in privatised, residential beachfront precincts or foreshores with esplanades (Section 5.3.1).
- The research into visual preferences of views in beach precincts, which was appended to an intercept questionnaire, did not achieve its intended outcomes (Section 1.8.3). A redesigned visual preference Q sort adapted to online use may be an appropriate method to understand people's visual preferences in beach precincts.

These research proposals are a fitting place to conclude the thesis, as, like the thesis, they reveal possible futures that require a focussed research framework to understand and operationalise the details. Some of these future research priorities were set out in section 7.3.3. Others will arise as the research model for examining conflict in the urban design of beach precincts is conducted on the suggested topics.

Using the model for urban design guidelines for beach precincts to guide the design and analysis of existing and future beach precincts will reveal ways to improve the underlying concepts. Utilising the beach precinct typology and adapting the model for use in the design

and analysis of places beyond the beach precinct will also reveal much about the model and those places.

This thesis will end with a quote that in many ways summarises the intent and nature of the research journey described in its contents: *There are two major reasons for attempting to understand the phenomenon of place. First, it is interesting in its own right as a fundamental expression of man's (sic) involvement in the world; and second, improved knowledge of place can contribute to the maintenance and manipulation of existing places and the creation of new places (Relph 1976 p 44).*

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Appendix A

Urban Design Walk-through Analysis Worksheets

Urban Design Walk-through Analysis:**Observation Point:**

Observation Point View Characteristics: *(Take photos of any walking barriers, interruptions, poor routes, compromised access, lack of seats, poorly sited street furniture, traffic dominance, unattractive street edge or unsafe spaces or conditions).* Approximate Distances adopted for the analysis descriptions: **Location** 0 to 35 metres. **Spectator** Distance 35 to 70 metres, **Distant** 70 to 500 metres, **Horizon** 500 metres plus.

People visible:

	None	≤ 10	11-20	21-50	51 ≥ 100
Location					
Spectator					
Distant					

Other observation points visible:

Activities Visible: (All through analysis observed at the Location): tick boxes if applicable

Movement				
Walking	Jogging	Cycling	Pushing a Pram	Skateboarding
Wheelchair	Walking a dog	Walking Aide	Driving/Riding	

Elaborative:

Activities in the public space					
Standing	Sitting	Reading	Eating	Drinking	Talking
Viewing	Watching others	Using BBQ	Playing	Supervising play	Taking Photos
Using Shower	Changing Clothes	Carrying bags	Picnicking	Working	Smoking
Extended Stay Observed	Using Facilities	Shopping or Selling	Waiting or Meeting		
Using Mobile	Lying Down	Other			
Beach Specific Activities					
Swimming	Paddling	Surf or Bodyboarding	In the Water	SLSC Activity	
Fishing	Boating	Kite boarding	Jet-skiing	Sunbathing	Digging sand

Elaborative:

Facilities Visible:

Bench Seats	Seat and Table	Bubbler	Shower	Toilets	Changing	Bins
Viewing Platform	Children's Play Area	Shade Tree	BBQ	Grassed Open Space		
Public transport stop	Parking	SLSC	Other:			

Elaborative:

No Shade, Limited Shade, Shade in wrong place, Shade where needed, Fully shaded

Activity and Facility Rating: Very Poor, Poor, Acceptable, Good, Very Good, Excellent.

Comment on the Nature of the Restorative Beach Precinct Environment at the OP

Using Kaplan's analysis of the restorative relationship people have in preferred natural environments such as the Beach Precinct comment briefly on the following:

Being Away: How different and idyllic is the immediate locality of the observation point compared to the usual urban environment of the observer? In this place am I tempted to stay and linger or move on?

Fascination: Are there views, objects or features I would like to take photographs of? (Horizons; beaches, trees, headlands, exceptional architecture or street views, bays, waves, sunrises and sunsets, panoramas, views and vistas).

Extent: From the observation point how are the surrounding spaces connected, arranged or enclosed to where I stand? How is the space around me defined by routes, limits and edges?

Compatibility: How compatible is the immediate location to my preferences for activity and amenity and why? How does the place rate as somewhere to relax, watch others and enjoy the views? Would I stay here to read a book or lie down?

Restorative Rating: Very Poor, Poor, Acceptable, Good, Very Good, Excellent.

Governance: *Has the locality been arranged for people to walk in it?* In a **Walkable** place the walker has movement priority and is not in conflict with other forms of transport. There is a compact public space network with a hierarchy of modestly dimensioned spaces where the importance and use of the different spaces is clear. There are **Suitable** public and private space designs, developments and management of public and private spaces, places and edges that provides shelter, facility and amenity. The public spaces design does not create unnecessary conflict amongst users. Space is allocated to provide opportunities to draw benefit from the particular and inherent attributes of place to its users. **Available** describes how the spaces, places, forms and edges of a locality are arranged and oriented to the attributes that create value in the precinct. Thereby, allowing the locality to produce different uses, activities and experiences for the users of the precinct.

Governance Attributes and Characteristics		Rating
Walkable		
What are the width, surface and condition of footpaths?	Do paths take people where they might want to go?	
Is there route conflict with motorised transport?	Are the places people might want to walk to conveniently close together?	
Are footpaths and routes suitable for the young, elderly, partially sighted, deaf, movement or otherwise impaired? Are there enough places to stop, eat, drink or socialise or seek shade, shelter and rest along the paths?	Are the routes, lights, kerbs and crossings prioritised for walking?	
Suitable		
Are seats, tables, shade and other facilities oriented towards the benefits of amenities and activities?	Are amenities, facilities and activities arranged to minimise conflict between different user groups?	
Are public facilities sturdy with fittings that are not flimsy?	Do public facilities have surfaces that are not easily vandalised?	
Are suitable public spaces, places and amenities arranged to provide for connection to nature?	Are transitional zones between buildings and spaces carefully designed to mix uses?	
Is parking and traffic allowed to dominate public space?	Are there enough bins in the locality and is it regularly cleaned and well cared for?	
Available		
Are there local food and drink outlets, toilets, showers, changing and other facilities to support extended stays?		
Are the spaces, places, forms and edges arranged and oriented to make best use of local potential activities and experiences?		
Is there a visible events and activities program?	Are there visible feedback systems to report problems to responsible authorities?	

Elaborative Observations:

Overall Governance Rating Scale: Very Poor, Poor, Acceptable, Good, Very Good, Excellent.

Accessibility: *Where people can and cannot go and how easily they understand what choices are on offer.*

Connected: how easily can people get to the visible destinations within and outside of the locality? **Permeable:** how well people can negotiate the visible, invisible, implied and actual barriers to movement and access to activity, facility and amenity in the locality. **Openness:** how easy is it for people to understand which spaces are public and they may use and the private places they may go into to access activity or facility.

Accessibility Attributes and Characteristics				Rating
Connected				
Visible public transport stops	Visible Beach Access	Short routes	Route dead ends	
Number of visible destinations.		Logical walking routes to uses, activities and environments.		
Visual connections to other places in walking distance outside precinct.				
Good wide walking surfaces avoiding steps and changes of level.		Alternative route options available.		
Permeable				
Visible and physical barriers to walking or access to destinations?				
Pathways obstructed by plantings, traffic, litter, street furniture.		Walking Priority over other modes of transport.		
Mobility conflicts with others along the walkway.		Widths and edges of roads are appropriate for walkers.		
Navigation is aided by edges, landmarks, natural and built features, distinctive places, signage and views.				
Openness				
Universal access is possible to all public spaces and commercial private spaces.				
Public spaces, edges, buildings and destinations are detailed, clearly signed, well lit and legible.				
Are edges of buildings blank along public spaces?		International graphic signage is legible, suitable and well sited.		
Public spaces, edges and buildings invite entry and purposive use.		Are there barriers based on age, gender, social status, mobility, infirmity or culture to public spaces?		

Elaborative Observations:

Overall Accessibility Rating: Very Poor, Poor, Acceptable, Good, Very Good, Excellent.

Diversity: *What can people do in this locality?* There is **Opportunity** to engage in preferred artistic, educational, employment, and entrepreneurial, recreational or social activities. There is a **Choice** of spaces, places, and forms for a range of sensory experiences at different times and in different environmental contexts appropriate to their age, gender, culture, or income. People are **Supported** by the places, spaces, edges and urban forms that contribute to personal and social meaning, allow extended stays, opportunity and choice for different activities that use the amenities, facilities and that align to the specific attributes of a place.

Diversity Attributes and Characteristics		Rating
Opportunity		
Are there choices for recreational or social activity in the public places and spaces?	Are the commercial and private edges supportive of activity and extended stay?	
Are the spaces or places supportive for artistic, educational or entrepreneurial activity?	Are there any educational, historical or cultural references in the spaces and places?	
Can the spaces and places support temporary uses such as markets, artworks and temporary buildings?	Are there co-located amenities, facilities and infrastructure that support extended stays?	
Are the public spaces and place designed to allow for a connection to the significant natural landscapes?		
Choice		
Can people personalise or territorialise spaces and places?	Are the spaces, places and buildings diverse in shape and size?	
Are choices of activity oriented to age or gender?	Estimate how many people could assemble and disperse at the location.	
Are the spaces and places designed to offer a variety of sensory experiences?		
Are there spaces and places for activity, watching or relaxation?		
Supported		
Are there suitable places to sit, read, rest, or shelter?	Are the spaces oriented to enjoying the views?	
Are there places to eat, drink and socialise?	Are there suitable transitions between the public, private and commercial spaces and places?	
Are spaces and places organised and oriented to provide a pleasant experience of the locality?		

Elaborative Observations:

Overall Diversity Rating: Very Poor, Poor, Acceptable, Good, Very Good, Excellent.

Human scale and need: *How does it feel here?* Are there **Sociable** public spaces, places and edges to private spaces for all people to meet and interact at different times and in different contexts? Do people feel **Safe** in the public and private places and spaces? Can people easily make sense of the place, feel secure, orient and fulfil physiological and psychological needs and preferences? Does the locality have **Attractive** elements, with directional compositions of views, vistas and panoramas of buildings, public landscapes and streetscapes that appeal to the individual's sensory perceptions? Are there stimulating spaces and places that are distinctive, interesting, surprising, delightful and inviting and encourage people to linger and appreciate them?

Human Scale and Need Attributes Characteristics		Rating
Sociable		
Are the public spaces and places welcoming for people to meet and interact?	Are the public and commercial spaces suitable for people of diverse ages, gender and cultures?	
Are there spaces and places for different genders and ages to participate in social activities?	Are there spaces, places or activities that exclude or deter women, young, or older people?	
Can women, young, or older people gather to socialise at different times and seasons?		
Are the public paths, spaces or places overcrowded, busy, lightly used or deserted?		
Safe		
Is there potential for conflict with other people, animals or traffic on footpaths?	Is there potential for conflict with other people in the public or private spaces and places?	
Are there hiding places, anti-social or dangerous behaviours in the locality?	Are public spaces and places well lit and observable from adjoining places and buildings?	
Is traffic separated from public spaces for social and recreational activity?	Is there evidence of litter or vandalism?	
Are there places to support physiological functions?	Are there clear sightlines, visible security systems and alternate routes?	
Are views and other amenities accessible for people with mobility impairment?	Does the location feel safe for use throughout the day or night?	
Attractive		
Are there distinctive or pleasing panoramas, vistas and views in different directions from the location?	Is the location attractive to all the senses?	
Is the street furniture and layout of amenities and facilities attractive?	Are the natural and planted landscapes varied, balanced and uncluttered?	
Are places and spaces and amenities attractive enough to fascinate and invite people to linger?	Do the public spaces and adjacent buildings provide a sense of local identity and visual quality?	
Is the location detailed, rich, interesting, surprising, delightful and inviting and informative of its culture, uses and history?		

Elaborative Observations:

Overall Human Scale and Need Rating: Very Poor, Poor, Acceptable, Good, Very Good and Excellent.

Appendix B

Field Observation Worksheets

Field Observations

Beach Precinct	Observation Point	Date	Time	Weather

5 Minute Snapshots: Movement

Direction	Walker	Jogger	Cyclist	Pram	Skater	Other

Comments

5 minute Snapshots: Activity

Quadrant	
Top Left	
Top Right	
Bottom Left	
Bottom Right	

Comments

Appendix C

Beach Intercept Questionnaire and Photographic Preference Survey



BOND UNIVERSITY

INSTITUTE OF SUSTAINABLE
DEVELOPMENT & ARCHITECTURE

The Urban Design Attributes, Characteristics and Values of Beach Precincts

I am at least 18 years old. I have had the questionnaire and photographic preference survey explained to me and I understand that I will be asked to provide a response of my opinions and the reasons for those opinions to questions that will be asked of me on the urban design of beach precincts. I am aware that I can withdraw from the research at any time without penalty.

Should you have any complaints concerning the manner in which this research is being conducted please make contact with:

Bond University Human Research Ethics Committee,

C/o Bond University Office of Research Services.

Bond University, Gold Coast, 4229

Tel: +61 7 5595 4194 Fax: +61 7 5595 1120 Email: buhrec@bond.edu.au

If you wish we can voice record your answers to some of the questions. We thank you for taking the time to assist us with this research

<i>Location: e.g. BHSN</i>	<i>Date</i>	<i>Time (Circle)</i>		
		<i>Morning</i> <i>06.00 – 10.00</i>	<i>Midday</i> <i>10.00 – 14.00</i>	<i>Afternoon</i> <i>14.00-18.00</i>

Do not write here, to be completed by the researcher

Beach Precinct Intercept Questionnaire

<i>Beach Precinct Observation Point:</i>	<i>Time and Date:</i>
<i>Do not fill in this box, to be completed by Researcher.</i>	

- This questionnaire asks you about the way you use the beach environment.
- Please think carefully about the answers you give.
- **Important** – the questionnaire is anonymous and confidential, and will only be used for research purposes.

1. Age

18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	75+
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2. Male/Female

3. If you visiting the beach as part of a group are they friends or family? *(Please circle)?*

Friends Family Friends and Family Other

4. If yes how many people are in your group?

5. Are you a Surf Life Saving Club member? *(Please circle)* Yes No Social Member

6. Do you consider yourself a resident, visitor or tourist? *(Please circle)* Resident Visitor Tourist

7. Where do you normally live? *(Please circle)*

In this neighbourhood	Gold Coast	Brisbane	Other South East Queensland
New South Wales	Other Australian State/Territory		New Zealand
Other Country: Please state			

8. Which beach do you most frequently visit on the Gold Coast?

9. Briefly: why do you go to that beach?

10. How often do you visit a beach? (Any beach) *(Please tick)*

Every day	
Most days	
2-3 times a week	
About once a week	

About once a fortnight	
Monthly	
Rarely	

11. How long do you intend to stay at the beach today? *(Please tick)*

Less than an hour		4 – 6 hours	
1-2 hours		6 – 8 hours	
2-4 hours		Longer than 8 hours	

12. What is the purpose of your visit here today? *Please tick as many boxes as necessary*

Enjoy the views		Use the gym equipment	
Fresh air		Relax	
Enjoy being in Nature		Read	
Walking along the beach		Watch the world go by	
Walk through the beach park		Meet friends	
Run/jog/exercise		Meet family	
Cycle		Eat a meal	
Swim		Have a coffee, tea, soft drink etc.	
Paddle		Have a wine, beer etc.	
Surf, body board		Use the barbeques	
Walk the dog		Use the covered seating areas	
For children's play area		Tai chi or Yoga	
To play a beach game		Council organised activities	
Other please specify			

13. Please rank these facilities for a beach visit on a scale of 1 most useful to 5 least useful.

Showers		Exercise Equipment	
Restrooms		Cafe's/Restaurants	
Parking		Bars/Pubs	
Covered Seating		Mixed Retail	
Open seating		Ice Cream Parlours	
Picnic areas		Amusements	
Public BBQ		Public transport stop	
Shade trees		Lighting	
Children's play area		Security	

14. Circle the most you are willing to pay for parking per vehicle per day at the beach?

Nothing \$1 \$2 \$5 \$10 \$20

15. Should there be any restrictions on activities at the beach and in foreshore parklands? Yes/No.
Please tick the boxes where there should be restrictions tick as many boxes as necessary

Dogs on leash		Vehicles	
Dogs off leash		Music	
Skateboarding		Alcohol	
Playing informal games		Buskers	

Street Vendors		Fishing	
Surfing or Body Boarding		Cycling	
Other please state:			

16. Are there any activities you would like to see introduced for the beach and foreshore parklands?

17. Are there any facilities such as piers, jetties, children's water activity areas, gardens, amusements, you would like to see introduced into this beach precinct? If so what would they be?

18. Circle your preferred type or types of development for beachfront development?

Foreshore Parklands	Boardwalks	Esplanades
Private Homes	Apartments	Resorts

19. Why do you prefer those types of development?

20. What does being beside the seaside mean to you?

Photographic Preference Survey

Survey Set Used	
-----------------	--

Q21:

Which of the three pages of photographs do you like the best?		
Which are the most and least liked images on this page	Most Liked	Least liked

Q22: Please describe the features you like and **don't like** about the images on this page?

Features Liked	
Features Disliked	

Q23:

Which of the three pages do you like the least?		
Which are the most and least liked images on this page	Most Liked	Least liked

Q24: Please describe the features you like and **don't like** about the images on this page?

Features Liked	
Features Disliked	

Q25: Choose 3 images that you **like** the most from all of the 3 pages.

Most liked image	Next most liked image	Third most liked image

Q26: Choose 3 images that you most **dislike** the most from the 3 pages.

Least liked image	Next least liked image	Third least liked image

Photographic Preference Survey:

Set One

Page One



Photographic Preference Survey:

Set One

Page Two







MBBA1S



MBBA1U



MBBA1D



MBBA1I



BRBA1S



BRBA1U



BRBA1D



BRBA1I











Researcher notes for the completion of the survey

Explanation of Research for Participants

The research project is looking at the public space design in three different beach precincts on the Gold Coast. It is trying to determine the public preferences for the urban design and spatial layout of the built form next to the beach. It is in particular trying to understand which natural and built features the public prefers and expects in the design of beachfront land. These questions will help us to understand public preferences and expectations of beach precinct design.

Conducting the Survey

The respondent can stop giving answers at any time during the survey. Only select one set of three photographic preference surveys pages to show each participant. Try to ensure a balance of responses of all five sets during the period of survey by circulating through all the sets. Respondents may choose to fill in the form themselves or be assisted to read or answer the questionnaire and preference survey. The qualitative responses are important and can be recorded verbatim if the participant agrees.

Appendix D

Delphi Group Process and Informed Consent Letters



Date

Ethics Reference Number RO1303

The Urban Design Attributes, Characteristics and Values of Beach Precincts

My name is Nigel Cartlidge and I am currently completing a Doctor of Philosophy Sustainable Development at Bond University under the supervision of Dr Bhishna Bajracharya and Dr Daniel O'Hare.

I am conducting a research investigation into the urban design of beach precincts. I am specifically interested in the urban design attributes, characteristics and values of beach precincts on the Gold Coast.

As part of this study, I invite you to participate in a Delphi process as an expert in urban design, planning, development, management or active use of the beach precincts. This inquiry process will be conducted in three rounds. The initial round will ask you to provide your opinions and the reasons for those opinions on the urban design of beach precincts, based on questions that will be devised after an initial phase of public inquiry, urban design analysis and literature review. A summary of the group's opinions and their reasons will then be circulated to all members of the Delphi group. You will be invited to revise your first response in the light of that group summary. If a consensus of opinion is reached in this second round of the process, the Delphi group will be informed of that consensus opinion and any major dissenting opinions. If no clear consensus emerges in the second round, the group will be informed of the summarised opinions of other group members. This will be followed by a third and final round to seek further understanding of the opinions and reasoning of group members. This process is intended to elicit agreed expert opinions on the preferred urban design attributes, characteristics and values of beach precincts. It is hoped that you can allow approximately eight hours of your time to contribute to this process.

Participation in this Delphi process is **completely voluntary** and you may withdraw at any time without risking any negative consequences. If you choose to withdraw your participation in this study, the information you have provided will be immediately destroyed. All the data collected in this study will be treated with complete **confidentiality** and not made accessible to any person outside of the named researchers working on this project. The information I obtain from you will be dealt with in a manner that ensures you remain **anonymous**. Data will be stored in a secured location at Bond University for a period of five years in accordance with the guidelines set out by the Bond University Human Research Ethics Committee.

It is anticipated that the data collected during this study will assist us in understanding –the urban design, development, management and planning of beach precincts.

Should you have any complaints concerning the manner in which this research is being conducted please make contact with:-

Bond University Human Research Ethics Committee,

C/o Bond University Office of Research Services.

Bond University, Gold Coast, 4229

Tel: +61 7 5595 4194 Fax: +61 7 5595 1120 Email: buhrec@bond.edu.au

We thank you for taking the time to assist us with this research.

Yours sincerely,

Nigel Cartlidge

Dr Bhishna Bajracharya

Dr Daniel O'Hare

Signed



Return email address for responses:

ncartlid@bond.edu.au

The Urban Design Attributes, Characteristics and Values of Beach Precincts

Ethics Reference Number RO 1303

Participant Informed Consent Letter

I certify that I am at least 18 years old and that I am willing to participate in the above Bond University research project. I have read the Explanatory Statement and I am willing to participate in the three rounds of the Delphi Process. I clearly understand the purpose and objectives of this study, its limits and risks associated with my participation.

I understand that I will be asked to provide a response of my opinions and the reasons for those opinions to questions that will be asked of me on the urban design of beach precincts.

I understand that any information I provide is confidential, and that no information that could lead to the identification of any individual will be disclosed in any reports on the project, or to any other party. I am aware that I can withdraw from the research at any time without penalty.

Name:

Signature:

Date:

Email address:

NOTE: This study has been approved by Bond University Human Ethics Review Committee. If you have any complaints or reservations about this research, you may contact the Ethics Committee through the Research Ethics Co-ordinator (+61 7 5595 4194). Any issues will be treated in confidence and investigated fully, and you will be informed of the outcome.

Appendix E

Topic Questions for the Delphi Group

Topic Questions for the Delphi Group

The initial questions presented to the Delphi group were intended to be as open ended as possible to encourage comment but still be related to the initial research questions and the themes and topics that arose from the analysis of the stages of the research prior to the Delphi group considerations. All communication was conducted by individual e-mails.

The Delphi group members were asked to give their opinions, views and understanding of the preferable urban design attributes characteristics and values of beach precincts, their governance, design and development. They were introduced to the questions with some limited background information on the overarching research question, and the aims and areas of research of the thesis.

The Delphi members were encouraged to respond in any way they thought appropriate including the sharing of personal beach stories. The topic questions were elaborated with some summarised research findings up to this stage of the research. Some consideration was given to phrasing the questions without any explanatory background. However some explanation was thought necessary as the Delphi group contained members who were not necessarily conversant with urban design and planning terminology. This situation indicated that a minimal level of information and explanation was necessary, although it is recognised that the way that information is presented can lead responses. The questions were designed to explore the opinions the members of the Delphi group held about the following themes:

1. The nature of the spatial layout and land use typology of urban beach precincts.
2. The conflict over public access to the beach created by private ownership of beachfront development.
3. The perception that economic values have taken precedence in the initial development of beach precincts, and that restorational, social, cultural and environmental values have been secondary in decision making about the form of that development.
4. The restorational, spiritual, symbolic and cultural *values* of beach precincts in the Australian and universal context are enduring and should take precedence in decision making concerning the design and planning of beach precincts.

5. The appropriate nature of the characteristics and attributes of the *urban design* of beach precincts which would best enable egalitarian access to the health, lifestyle, recreational and restorational benefits of the beach.
6. The appropriate nature of the *governance* of beach precincts through the provision of public infrastructure, activities, amenities and facilities that were aligned with its recreational and restorational benefits.
7. The threat that erosion, severe weather events and climate change present to the appropriate design of beach precincts to ensure future resilience.

Question one was designed to identify the Delphi group members' preferences for the design of a new precinct rather than elicit their commentary on a particular case or cases of beach precinct. Some consideration was given to asking the group to comment on the three beach precincts in the case study, but, as a number of members were from outside of the Gold Coast and Australia, this was not thought to be a practical option although it would be interesting in another research context. The question was also intended to allow for peer review of the land use and access typology developed by the researcher up to this date to allow confirmation or lead to modification of the typology.

Question One: If you were able to determine and design the spatial arrangement and land uses of a new beach precinct, how would you do this? Please explain your choices.

The group members were given a copy of Figure 2.2 (Chapter Two) and informed that research to date indicated that the urban beach precincts on the Gold Coast largely follow the typology of land use and development described in the Figure. This Figure was described as indicating that land use and access in beach precincts is arranged in patterns of built form parallel to the beach.

The Delphi group were also informed that economic value in beach precincts is affected by access to the beach and the nature of views to the sea. The value of development falls as you move from the beach and often drops sharply as you cross the transit corridor. The research to date indicates that when first developing the beach precinct, the decision to build or not to build in the access form is considered to be critical. Each of these choices has a cascade of effects on the economic, social, cultural, lifestyle, recreational and environmental values and the potential development forms inland from the access form.

The second question for the Delphi group focused on the topic of public access to the beach. The survey of the informal literature on the topic of public access to the beach had revealed a number of related issues that concerned the spatial arrangement of the beach precinct and the nature of the transition from the natural environment of the beach to the built environment of the access and built forms.

Question Two: What would be your criteria for planning laws and policies to help determine the question of public access in beach precincts? Please give reasons for your opinions.

Delphi group members were given a copy of Figure 6.1.1 (Chapter Six) to identify the transitional spaces and boundaries that influence to topic of public access to beaches. They were informed that the diagram illustrated the problems of fixing and defining building lines next to an unstable natural environment and where the intent of public access may conflict with the location of public property. This was intended to enable responses from the Delphi group for their opinions on the theme of appropriate development models at the transitions of the built and natural forms of the beach precinct identified in the research up to this point.

The members were informed that research to date had revealed a public-private conflict over the way that the beach precinct is developed. They were informed that common law right of access in most jurisdictions only applies to the inter-tidal zone and that there is an enduring conflict between public access to the wet and dry sand and private ownership of the beach frontage wherever beachfront land is private.

The Delphi group was informed that the key issues identified in the research to date involve the movement of the beach and the determination of the location of the ‘lines in the sand’ by natural processes. The incremental reduction of public access to the beach, brought about by persistent pressure from beachfront landowners and local political processes and the liabilities that continued investment in beachfronts place on governments and society. The Delphi group were informed of the three options governments appeared to have in the governance of the backshore and foreshore:

1. Continue to permit owners of beachfront land to build and redevelop on their beachfront property as the planning regulations allow.
2. Allow further subdivision and development of undeveloped beachfront land.

3. Initiate buy back schemes of private property, combined with a halt to building and redeveloping beachfront land.

Question three sought to elicit the opinions of the Delphi group of the dominant values that they perceive are used in the design of beach precincts and elaborate about how development has been oriented to prioritise particular societal values and interests. The urban design literature implies that the social and cultural needs of people should dominate the design of development but the empirical evidence appears to indicate that the economic values of the dominant groups in society have been prioritised.

Question Three: Do you think that economic values have taken precedence over social, cultural and environmental values in the development of beach precincts?

Question Four was intended to explore the Delphi group's understandings of beach culture in Australia as either being a unique Australian beach culture or a local iteration of the same cultural values of the beach as apparently found other places. The literature review indicated that there were contending views on the existence of a beach culture unique to Australia. The question was phrased to explore the understandings and opinions of the Delphi group members of the relationship between the beach precinct as a place and its design to meet cultural meanings of place. In the second round members were asked to elaborate on their preferred values for the design of beach precincts.

Question Four: What is your view on the nature of beach cultures of Australia and other countries and its implications for the urban design of the beach precincts? Please explain your views.

The Delphi group members were informed that the literature suggests that Australians have a symbolic, spiritual, social and cultural relationship with beach precincts that is different to other places (Skinner, Gilbert and Edwards 2003). However, some of the results of the public inquiry of this research (Sections 5.4 and 6.1) suggest there is no observable difference between the attitudes of Australians and other nationalities to the public right of access to the beach.

The different interpretations of cultural identity are largely based on personal affiliations such as gender, race, religion as well as place and national identity (Castells 2006, Choy, Wadsworth and Burns 2009). The informal literature content analysis also indicated that attachment to the beach environment appeared to be based on universally held values that are

associated with access to the beach and transcend cultural modification (Cartlidge 2011b) and may be an evolutionary biologically human characteristics (Falk and Balling 2010, Home, Bauer and Hunziker 2010).

Question Five was designed to identify the preferences of the Delphi group for the alignment of urban design and planning of beach precincts to identified equity issues. The review of the formal and informal literature identified the way that urban design and planning devices played a part in enabling, restricting or denying access to those members of the public who wish to visit the beach but are not fortunate enough to live on the beach front or in a beach precinct and were disadvantaged in some way by the design and planning of beach precincts.

Question Five: What is your view of the desirable characteristics of an ideal beach precinct from an urban design and planning perspective to enable universal access to the mental and physical health, lifestyle, recreation and biophilic benefits of the beach?

The question was designed to focus on the relationship between urban design and planning, and the level of egalitarian opportunity to access all the benefits of beach access. It was thought that this question would produce different interpretations of the question dependent on the cultural orientation, background and profession of the Delphi group member and may reveal differences in opinion between the different professional viewpoints.

The Delphi group members were informed that the literature review of the public access to the beach through contemporary news articles and websites indicated that significant sections of the public who wish to visit beaches and beachfronts are deterred or prevented from doing so (Section 6.1.2). The urban design devices which had been identified during the research that limit access include inconvenient and expensive parking, lack of amenities and facilities to support extended stays, and the walling off of the beach by privately owned homes, apartments and resorts.

Question Six was designed to draw on the planning and development experience held by the members of the Delphi group. It was intended to focus on improving the decision making process of the planning and development industry in the creation and governance of places in the beach precinct that were responsive to the competing needs of the different interest groups who would use the precinct. This was phrased in terms of the beach precinct being an important part of the city to meet the active healthy living aspirations of residents, tourists and visitors.

Question Six: What changes to planning and development practices do you think are needed to improve decision making for healthy living, recreational opportunity and lifestyle choice in beach precincts amongst the competing interest groups?

The Delphi group members were informed that the beaches and foreshore parks of the Gold Coast are the most active recreational spaces of the city (Wake *et al.* 2008). They are also considered by the council to be an important part of the healthy living infrastructure of the city (Gold Coast Physical Activity Alliance 2010). Economically, they are also an important part of the tourist experience of the Gold Coast (Tourism Research Australia 2013). The Australian model of foreshore is often geared towards the self-reliant stay (Section 2.3), with a lesser provision of long stay public and commercial infrastructure in the beach precinct than is often found in other countries. A growing population is also likely to increase pressure on the existing foreshore and beaches from societies changing interests and needs (Raybould and Lazarow 2009).

Questions Seven a and b were designed to ask for the opinions of the Delphi group on two tightly related topics that affect the design of beach precincts and their governance in the transitional and often unstable spaces and edges of the interface of the natural and built environments of the beach precinct. The question was posed in two sections to understand the Delphi group members' response to coastal erosion and climate change on beachfronts and who is, or should be, responsible for the decisions taken in the past, the present and the future and who should be liable for those decisions.

Question Seven a: Do you have any views on the directions government can take to regulate the development and planning of beach frontages to improve the resilience of beach precincts to erosion, severe weather events and climate change?

Question Seven b: Local councils often do not have the financial or professional resources to effectively regulate the design, planning and development of beach precincts. Do you think this responsibility should be taken up by State or Federal government?

The Delphi group was informed that the research in this thesis indicated the continued development and redevelopment of private beachfront properties tends to increase public liability for their continued defence from storm events, erosion and probable sea level rises (Section 6.1). From the textual analysis it was identified that conflict between private property owners and local governments could be expected to continue, both from ongoing

efforts of the property owners to privatise ‘their beach’ and the public desire to access those beaches.

Climate change also increases the probable risks of public liability to insure and rebuild private property that may be damaged during extreme or prolonged weather events (Rudolf *et al.* 2012). The situation is further complicated by the limited financial resources of local councils, as they struggle to justify protracted legal battles with beachfront property owners who may have more personal motivation and funds to prosecute those battles (Killoran 2013a).